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Resettlement Administration
Washington

LAND POLICY CIRCULAR

August 1935

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The LAND POLICY CIRCULAR is issued by the Division of Land Utilization, Resettlement Administration, in cooperation with the Division of Land Economics of the Bureau of Agricultural Economics. Its purpose is to provide technical information in the field of land economics to assist the staff of the Resettlement Administration and its cooperating agencies and groups to keep in touch with current developments bearing upon their work. Its pages will serve as a clearing house for information concerning local, State, and Federal land planning activities and research.

RECENT ACT PROVIDES FUNDS
FOR AGRICULTURAL RESEARCH
AND EXTENSION PROGRAMS

A recent Federal act "to provide for research into basic laws and principles relating to agriculture, and to provide for the further development of cooperative agricultural extension work and the more complete endowment and support of land-grant colleges", Public No. 182 (H.R.7160) was approved June 29.

The Act is divided conveniently into two sections, one providing research and one extension funds. Title I (research) contains sections as follows:

The Secretary of Agriculture is authorized to "conduct research into laws and principles underlying basic problems of agriculture in its broadest aspects, research relating to the improvement of the quality of and the development of, and new and extended uses and markets for, agricultural commodities and by-products and manufacture thereof; and research relating to the consumption, development and use of land and water resources for agricultural purposes." Research authorized under this section shall be in addition to research provided for under existing law.

Experiment Stations Aided

The Secretary is also authorized to encourage similar research at agricultural experiment stations including the States, Territories, and Puerto Rico.

\$1,000,000 for First Year

For the research under this title there will be appropriated \$1,000,000 for the first fiscal year, and for each of the four fiscal years thereafter \$1,000,000 more than the amount authorized for the year preceding, and \$5,000,000 for each fiscal year thereafter. Sums so appropriated shall be in addition to, and not in substitution for appropriations for research or other activities of the Department of Agriculture and experiment stations, and money so appropriated will be available for the purchase and rental of land, and equipment and maintenance of buildings, and for printing and disseminating results of the research.

Allocation of Funds

Forty percent of the sums appropriated for any fiscal year shall be available for the Secretary of Agriculture as described under Section 1 above, although not more than 2 percent may be used for administration. These sums shall be designated "Special research fund, Department of Agriculture", and none shall be used for prosecution of research already instituted, or for any new research unless approved by the Secretary. One-half of this fund shall be used by the Secretary for establishing and maintaining research laboratories and facilities in the main agricultural regions, etc.

Sixty percent of the appropriated sums shall be available to experiment stations (under Section 2) as follows:

The Secretary shall allot (for each fiscal year for which an appropriation is made) to Puerto Rico and each State and territory "an amount which bears the same ratio to the total amount to be allotted as the rural population of Puerto Rico or State or Territory bears to the rural population of all the States, Territories and Puerto Rico as determined by the last preceding decennial census." However, no allotment or payment shall be made for any fiscal year in excess of the amount which any Territory, State or Puerto Rico makes available for such fiscal year out of its own funds for research and facilities therefor. Should any State, Territory or Puerto Rico fail to make available in any fiscal year a sum equal to the total amount to which it may be entitled, the Secretary may withhold such amount, and allot an additional amount not to exceed 20 percent of the original allotment to those States, Territories or Puerto Rico, which make such sums available. These sums will be paid in quarterly installments each fiscal year.

Extension Activities Aided (Title II)

In order to develop further the cooperative extension system for cooperative agricultural extension work between the agricultural colleges in the several States, there will be appropriated to pay expenses of cooperative extension work in agriculture and home economics and necessary printing to result, \$3,000,000 for the first fiscal year, and \$1,000,000 additional each fiscal year thereafter, until the sum of \$12,000,000 annually has been reached, this amount to continue annually thereafter.

\$980,000 of this sum shall be divided equally among the several States and Territory of Hawaii, the remainder shall be paid to the several States and Territory of Hawaii in the proportion that

the farm population of each bears to the total farm population of the States and Territory of Hawaii. Moreover, the States and Territory of Hawaii shall not be required to offset the allotments of this section, and the sums provided are in addition to sums otherwise appropriated, though they are available only if the State and Territory of Hawaii complies each fiscal year with other provisions for offset of appropriations for agricultural extension work.

A third provision of interest appears in Section 22; in order to provide for the more complete endowment and support of the colleges in the States and Territory of Hawaii entitled to benefits otherwise provided for, there will be appropriated annually for each fiscal year \$980,000 to be divided equally among the States and Territory of Hawaii. In addition there will be appropriated for the fiscal year following the first for which appropriation is made \$500,000 and for each of two fiscal years thereafter \$500,000 more than the amount authorized to be appropriated for the preceding fiscal year, and for each fiscal year thereafter \$1,500,000 to be allotted and paid each State and Territory of Hawaii in the proportion which total population of each State or Territory of Hawaii bears to the total population of all States and Territory of Hawaii.

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WESTERN FARM ECONOMIC ASSOCIATION MEETS AT CORVALLIS

A considerable portion of the program of the Western Farm Economic Association, which met at Corvallis, Oregon August 13-14, was devoted this year to planning, and to land problems and their solution. The general program was as follows:

August 13 - Relation of Economic Theory to Present Agricultural Programs - J.M. Tinley, University of California,
Chairman

1. Laissez-Faire in Theory and Practice
George M. Peterson, University of California
2. Evaluation of Present Agricultural Programs
in Terms of Economic Theory
M.R. Benedict, University of California

General Aspects of Regional Planning

1. The Place of Agricultural Planning in National Economy - J.M. Tinley
2. Farm Management Approach to Regional Planning - C.L. Holmes, Bureau of Agricultural Economics
3. Extension Work as Related to Regional Planning - L.M. Vaughan, U.S. Extension Service

Marketing Agreements - E.F. Dunmeier, Chairman

1. Marketing Agreements for Fruits and Vegetables Produced in California - H.R. Wellman, University of California
2. Some Experiences with Marketing Agreements in Oregon - Paul Carpenter, Oregon Agricultural College
3. Some Experiences with Marketing Agreements in Washington - E.F. Dunmeier, State College of Washington

August 14 - Land Planning - David Weeks, Chairman

1. The Organization of Land-Use Planning in Oregon - A.S. Burrier, Resettlement Administration
2. General Aspects of Land Planning - David Weeks, University of California
3. Federal Program of Land-Use and Rehabilitation - R.E. Willard, Regional Director, Resettlement Administration
4. Land-Use Planning - H.E. Selby, Resettlement Administration
5. Rural Rehabilitation Program - Leslie S. Sorenson, Resettlement Administration
6. Objectives and Types of Development on Submarginal Land - Harry G. Ade, Resettlement Administration

The final sessions were concerned with the subject of "Production Control" - the program, agricultural trends, and proposed changes in programs.

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PROJECTS WILL DEMONSTRATE
ECONOMIC USE OF POOR FARM
LANDS

Of the \$22,000,000 recommended by the Advisory Committee on Allotments of the Works Program for the use of the Resettlement Administration in purchasing land, \$20,000,000 would be utilized to carry out a series of projects to demonstrate how poor farm land

can be developed for valuable economic purposes. The remaining \$2,000,000 has been tentatively assigned to provide lands for resettlement purposes.

These projects will emphasize the positive use of poor lands for purposes to which they are physically and economically suited. All land acquired under this program has some public value, for forestry, watershed protection, recreation, wildlife protection, or other public purposes.

That such projects are necessary is evident. The serious depletion of natural resources through erosion, the cutting of timber, and overgrazing of pasture lands have made it imperative that steps be taken to carry out the type of conservation work which private landowners cannot afford to undertake. The low incomes and unsatisfactory living standards of farm families in many poor land areas necessitate a program of rehabilitation to enable them to achieve economic independence on a higher living standard. Local governments have been financially handicapped by the frequent necessity of maintaining roads, schools, and other public services in poor farm areas which provided little or no taxes in return. The development of more economic methods of utilizing land will contribute to the solution of many local fiscal problems in areas where families are unable to make a living through farming.

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NEED FOR STATE PLANNING DESCRIBED IN REPORT

That Minnesota has come of age and is approaching a period of maturity, and is "now face to face with the sober and thought-provoking necessity of developing a way of life for a mature community" is demonstrated in the Report of the Minnesota State Planning Board, recently released.

This Report has been prepared jointly by the Minnesota State Planning Board appointed by the Governor, of which Richard E. Scammon is chairman, and Mr. Roland S. Vaile, the Federal Consultant serving under the National Resources Board. Part I is a digest and interpretation of the findings of the Board; Part II a series of committee reports.

Two auxiliary projects have been undertaken by the Board - one a county road mapping project involving the compilation of maps

from data taken from official records; one the preparation of an annotated card catalogue of information on Minnesota (natural resources, people, industries, etc.), and it is urged that a perpetual inventory along the lines already started by the Board should be continued.

Proof that the State is approaching maturity, emphasizing, therefore, the desirability and necessity of planning, lies, the authors believe, in the following facts:

1. Population

Immigration into the State ceased many years ago. In spite of the low density of population, there are many evidences that Minnesota has very nearly reached the maximum population, unless some great industrial or social change takes place. The population is rapidly attaining an age distribution typical of mature communities; farm population has not increased in twenty years, and city growth has been checked because industries on which such growth depends have reached the optimum point. In the cities, the desirable residential areas of a few years ago have become the slums of today. Minnesota, therefore, considering the above points, is safe in relating its plans to a period of slow population increase.

2. Agriculture

Agriculture appears to have reached a period of stability since nearly all of the land in Minnesota economically adapted to agriculture is now in farms, and has been for the past 20 years; the index of the total quantity of 16 major farm products sold has, moreover, fluctuated but little during the past decade.

3. Forestry

Primeval forests have largely disappeared, and drought has ruined many shelter belts and woodlots. Projects under way to counteract these tendencies should be carried to completion. The condition of the forests raises the important question as to whether large forest areas should be publicly or privately owned. Forms of taxation to encourage private forestry ownership should be developed, and the matter of State vs. Federal control should have consideration.

4. Industry

The Twin Cities and Duluth have developed into mature metropolitan centers with the State and parts of surrounding states as the hinterland; have developed into processing points for raw materials, the manufacture of some articles required for consumption within the area, and have also developed as financial centers. Two

early industries have reached or passed their prime - flour milling and lumbering -- all facts tending, the authors believe, to show that Minnesota has come of age.

5. Income

There has been no rapid expansion in the quantity of goods and services produced over a considerable period of time in Minnesota; the distribution of income has been more nearly uniform than in many older, more highly industrialized sections of the country; the State apparently has not reached the same stage of concentration of industrial ownership and control found in other localities.

6. Power

Minnesota has no large water power resources, but the vast resources of peat within her borders, and lignite in the Dakotas provide sources of fuel for power production. It is recommended that the State promote experiments to develop these resources, that a detailed study of power resources be made, and that the promotion of rural electrification be undertaken, and that needed legislation be fostered.

7. Transportation

The building of the "railroad plant" in Minnesota has been essentially completed, although serious problems related thereto still exist which should be studied. Highways are rapidly approaching the stage of completeness already reached by the highways; recently there has been some revival of interest in waterways. In general, however, it is apparent that Minnesota has passed the youthful state of rapid development, and the problem ahead lies in using to the best advantage the transportation structure already built.

The Need for Planning

Each of the above changes has had a cause, and teaches the lesson of the desirability and necessity of planning. "The problem of the next few decades is, therefore," the Planning Board believes, "to so marshal the productive forces of the State that the energies of the people may be used in production with at least 50 percent more effectiveness than at present. Certainly, there is nothing in the present situation to suggest an attitude of defeatism. Rather the reverse, for progress in per capita production and the attendant increase in standard of living is dependent neither on increasing population nor the discovery of natural resources not already made available in Minnesota. The demands of the future can be met by a fuller utilization of technical processes, human skills, and organizing ability by the people of this and coming generations."

FURTHER RADIO DISCUSSIONS
OF LAND PROBLEMS AND
ADJUSTMENT OF INTEREST

Northeastern States

The problem of land adjustment in the Northeastern States and the withdrawal there of farm land from cultivation is no academic issue, according to A.W. Manchester, Regional Director Region I, Resettlement Administration, in a conservation day broadcast on July 7. Such land withdrawal is a process which has been going on for centuries. For some time after it began, land abandonment in some sections of the Northeast was offset by land clearing in others, so that there was no loss in total acreage. Since 1880, however, the decline has been rapid. In that year the Northeast had approximately 50 million acres of crop land; 50 years later, in 1930, the 50 million had declined to 39 million.

The principal explanation of the abandonment lies in the fact that the railroad, the refrigerator car, and other improved methods of transportation and preservation made vast new areas of easily tilled and fertile land efficient and effective contributors to the food supply of eastern cities and manufacturing towns formerly dependent largely upon local supplies.

From the human standpoint the process of abandonment is likely to be something like this: the unproductive farm yields only a meager income. The children, particularly the more enterprising, look for opportunities elsewhere. Eventually only the old people are left. As their strength wanes, they use less and less until the fields have pretty much disappeared.

Within the past year the Federal Government has come into the picture with its "submarginal land program", under which farms too poor to support farm families are purchased, stranded occupants aided where necessary in reestablishing themselves under more favorable economic opportunities elsewhere, and the lands reforested or developed for recreational uses. The program as it stands at present contemplates the purchase, roughly, of one-half million acres in the eleven Northeastern States. The lands will be handled in a way which will adequately protect water supplies and stream flow, will assure the needed supplies of high grade timber for local industries, preserve scenic beauties, provide needed recreational facilities, and adequately protect our dwindling wildlife. The present program, modest as it is in the Northeast, will at least serve to test the practicability of aiding present stranded farm populations in finding

a solution of their problem through resettlement in nearby, more favored locations, and it will provide some areas which, when developed for their new uses, will be of great value to the congested populations of the Northeast.

Corn Belt

Until recent years there has never been a serious question raised with regard to the use of land in the Corn Belt, observed E.A. Norton, Acting Regional Director, Resettlement Administration, in a recent broadcast. The people who settled the area and those who now inhabit it have been industrious, enterprising, and entirely producer-minded. They have believed that the operation of individual self-interest through private land ownership would bring maximum production of wealth, sound methods of land utilization, and a wholesome country life. This philosophy was based largely on the assumption that the natural resources of the region were everlasting. Ample evidence already exists of the unsoundness of this assumption.

The reason why the Corn Belt has been among the last of the great agricultural producing regions of the country to show a need for adjustment in land use and management lies in the existence of favorable crop production factors, adequate transportation, markets close at hand, and a great wealth of natural resource in the soil. Within the last twenty years numerous farms scattered over the entire Corn Belt and located on land which maintained a relatively high level of production during the early period of its use have failed to produce an income sufficient to carry them.

There are two distinct problems in the development of a land program for the Corn Belt. They apply to different classes of land. The first problem is that of obtaining the adoption of a sound management program on the fertile or supermarginal lands which will maintain and control production, and insure the durability and permanency of the land. Much has already been done to attack this problem through experimentation, demonstration and extension. The second problem is to secure the transfer of lands from uses to which they are not well adapted to uses more conducive to the general welfare. Such land includes that of low productive capacity, and that physically handicapped, much of which should never have been broken for cultivation. Tax delinquency, land abandonment, and the loss of enough revenue to threaten the existence of local government are real questions in areas where much of this land exists.

Programs have already been initiated by the Federal Government, and by some of the States to make adjustments in the use of this land. Abandoned and cut-over land has been purchased for the

purpose of reforestation. This is a step in the right direction, but these purchase programs have hardly made a dent in the problem as yet, and have not reached all the distressed areas. Man, through occupancy and development, is largely responsible for creating the problems in land use and adjustment in the Corn Belt. He can and will build a land policy which will bring the physical resources in harmony with their environment, and develop them to their highest economic and social use.

The Land Utilization Program

The general land utilization program of the Resettlement Administration was described in a radio talk by C.F. Clayton, Project Planning and Control Section, Resettlement Administration, on the conservation day period broadcast, July 19.

The first and most important resource of every nation, is, Mr. Clayton believes, the people who compose it. The composition, characteristics, and distribution of the country's population constitute the primary foundation of its prosperity. The second basic resource of a nation is land. It is precisely this simple fact that our human resources and our land resources are being seriously misused which has led to the establishment of a national program of land utilization.

For a while it seems feasible, where a country is large and endowed with resources as is ours, to ignore situations wherein land and people are subjected to deterioration and ruin, but we are beginning to see that the cost of neglecting problems of this sort must be far greater than the relatively small expenditure necessary to correct these situations. The need for action and adjustment is clear. A land utilization program should be, at first, experimental or demonstrational in character. We need to learn what adjustments can be made, what effect they will have, their benefits and disadvantages. We need to explore the relation of adjustments in the use of land to adjustments in taxation, adjustments in legislation governing the use of land for various purposes, and so on.

Further, we must recognize that a program of land utilization to be effective must be a long-time program. Under the projected program of land utilization there have been established more than two hundred fifty projects embracing nearly every State on which at least preliminary investigational work has been undertaken. In connection with these projects, it is proposed that the Federal Government acquire a considerable acreage of land with a view to devoting this land to uses for which the land is best fitted, and

at the same time assisting the families occupying these lands to find better locations. In short, the projects are designed to correct misuse of our two major resources; the aim is to restore the land and the people.

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UPPER MONONGAHELA VALLEY REPORT RELEASED

This is a summary report of the Committee of three - Oscar L. Chapman, Department of Interior, J.F. Carter, Department of Agriculture, and Richardson Saunders, Department of Labor - appointed by the President to cooperate with the Upper Monongahela Planning Council in investigating the project of joint Federal-local planning for the rehabilitation and development of the Upper Monongahela Valley, West Virginia. The committee has studied material and human resources of the region; economic and social conditions; economic and social objectives in a program of rehabilitation and development; and has proposed procedure for private-local-State-Federal cooperation in putting such a program into effect.

Summary of Findings

Ten counties in rugged northern West Virginia (Barbour, Harrison, Lewis, Marion, Monongalia, Preston, Randolph, Taylor, Tucker, and Upshur) in the area known as the Allegheny plateau and the Allegheny highlands were selected for study.

Population

In this area 340,000 people, one-fifth of the total of the State, reside concentrated largely in or near the valleys formed by the principal streams. Seventy percent of the population is classed as "rural"; 44 percent is "rural non-farm", dependent for the most part upon mining for a livelihood. Per thousand of population the Valley has about one-eighth fewer workers in the productive age group (25-44 years) than the average for the United States, and families here are 12.4 percent larger than in the Nation as a whole. Agriculture and mining account each for one-fifth of the gainfully occupied of the area.

One-sixth more native-born whites per thousand persons are recorded in this area than in the nation. Foreign born white and negro groups reside largely in the three mining counties.

Wealth

The median value of owned non-farm homes and median monthly rentals are much less in the Valley than in the United States. In 1930 the average value per farm of all farm property in this area was \$5,502 as against the average for the United States of \$9,103. Seventy-five out of every 100 houses used kerosene or gasoline lamps.

In 1930 the ratio of debt to value of mortgaged farms in the Valley was 22.5 percent less than in the Nation. Thirty-six percent of the farm land and 55 percent of the number of farms were tax delinquent in 1932; the average size of tax delinquent farm was 76 acres.

Industries

The peak of mine employment occurred in the Valley in 1923. Since 1927 such employment has decreased very rapidly. Since 1919 the decrease in number of manufacturing wage earners has been relatively greater than in the United States at large. In 1929 the average amount of retail sales per inhabitant in the Valley was \$253 as against \$400 for the Nation.

Resources

Coal, oil, natural gas, limestone, clay, building stone, sand and gravel are the principal mineral resources of the area. Water power development in large quantities is feasible. Several schemes for power development have been suggested. Flood control also is necessary.

The area contains much rough, stony land suitable for forests and grazing, and also some best suited for general farming and grazing. Because of predominating soil and topography, 56 percent of the total land area is potential forest land.

Social Conditions

Per thousand gainful workers in April 1930, there were 1/13 more unemployed persons in this area than in the country as a whole. Three-fifths of the total families in the area on relief rolls live in the three mining counties.

Ninety-two "stranded" communities exist in the area: 19 are considered to be permanently stranded; 25 apparently permanently stranded; 36 are partially stranded; and 11 temporarily stranded. Of these, 62 are dependent on mining; 23 on lumbering.

Recommendations

The committee has made several suggestions for improving social and economic conditions in the Valley:

1. The establishment of new industries, utilizing locally produced raw materials so as to conserve a larger proportion of the value added by manufacture, such industries to be financed as far as possible by local capital; to be diversified and organized to take advantage of natural resources of the area. Development of small unit (handicraft) industries. Establishment of cooperative marketing associations to market the handicraft products.
2. Development of a recreational area similar to New York's Adirondack State Park to attract out-of-state patronage; stream purification; development of artificial lakes, etc., as part of power and flood control policy.
3. Removal of miners and their families from congested coal camps to small farm homesteads easily accessible to the mines. The resettlement on farm or forest-farm homesteads of deserving farmers and their families now occupying submarginal farms.
4. Establishment of a definite educational program for the area stressing vocational and self-help education for children and adults; development of an understanding among all classes of advantages and limitations of the area.
5. As a yardstick with which to measure ability and inclination of private capital to benefit the region socially and industrially, the committee encourages the utilization of existing resources and the development of potential resources by private utility interests. Should private capital fail to avail itself of opportunities, public authority should act.
6. Establishment of agencies and small administrative personnel to demonstrate technique of regional planning through maximum utilization of local and private initiative and resources, and through coordination of Federal, State, local and private projects and activities.

Dissenting Report Submitted

Mr. Oscar L. Chapman, chairman of the committee, dissented with recommendation (5) above, concerning development of public utilities by private interests.

"It is", Mr. Chapman stated, "my sincere belief that the security, happiness, and general welfare of the greatest number of people in the Upper Monongahela Valley can best be obtained through public ownership and operation of the utilities of this area, coal as well as hydroelectric power. Past experience has demonstrated that the forces of private utility development have shown little disposition to work for the general good of the people living in this region. In consequence, it is my judgment that only by public ownership and operation of utilities can this area, in the long run, be benefitted, socially as well as industrially."

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PRODUCTION TRENDS IN SELECTED RANGE LIVESTOCK
PRODUCING STATES 1900 to DATE

By

W.W. Wilcox
Division of Land Utilization
Resettlement Administration

The present abundance of agricultural products and producing facilities, it is believed, will gradually disappear as a result of the increasing demand from a larger domestic population. In the interim, land is being and will continue to be retired from crop production, both with and without governmental supervision. In general it is the land which is marginal for crop production which is being permanently or semi-permanently retired. Is it probable that this marginal crop land will be desired for pasture in the future?

A consideration of the trends in livestock numbers and feed production in the range livestock region, and the nature of the physical resources of the range, provides a part of the basis for the answer.

Since any attempt to appraise the relative demand for land for pasture in other sections of the United States must, among other things, include an analysis of probable range livestock production, data on trends are here presented for each of the States of Wyoming, Montana, and Texas. Similar data have been combined for the three States - Arizona, New Mexico, and Nevada.

Over one-half of the sheep and more than one-third of the cattle in the United States are found in the range livestock regions of the Great Plains and Western States. The number of livestock produced in these regions, and changes in their production are of vital importance, not only to the ranchers, but to the farmers in other agricultural regions. Trends in livestock production in these regions may be expected to have an important influence on beef cattle and sheep production in other sections of the United States in the future as they have had in the past. In particular, the competitive position of beef cattle and sheep production with other systems of farming, such as dairying and pork production in the Corn Belt and general farming regions, will be influenced largely by the volume of range livestock marketed.

Source and Limitations of Livestock Data

The Bureau of Agricultural Economics has recently revised its series of "Numbers of Livestock on Farms and Ranches on January 1" in the Western States. These data are available only on a State basis. In view of the limitations in availability of data for parts of States, it seemed advisable to limit the study to certain States in which the range livestock industry was particularly important. The total number of roughage-consuming animal units was computed by adding to the total number of cattle and horses one-fifth the number of sheep.

Changing Character of the Industry

During the period 1900-1935, there has been a marked shift in the character of the range livestock industry. In the early years many of the cattle were kept on the range until they were three and four years old. Now a number of the ranchers sell their stock as calves at weaning time, and most of them sell their stock when much younger than was formerly the case. This shift to the production of younger stock probably means more pounds of beef marketed for each animal unit on hand in January, and perhaps more beef per acre of land grazed. The quantitative effect of this shift has not been adequately analyzed. It appears, however, that the grazing load on the range remains in about the same relation to the number of animals on hand January 1 as in the earlier years.

Changes in the character of the sheep and wool industry have been even more pronounced. In the early years wool production received major emphasis. A large proportion of the flock on hand January 1 was made up of wethers, one year old or over, kept for their wool production. Through the years there has been a gradual shift to more emphasis on lamb production until now sheep on farms and ranches in January are almost without exception the breeding flock. The lambs come relatively early in the spring, and move to market or to the feed lot in the late summer and fall. Obviously, meat production has been increased by this change, and it appears that the grazing load on the range in relation to the number of sheep on hand in January may be heavier by around 10 percent than it was in the earlier years.

Animal units grazed on the national forests are the number for which permits were issued, and include horses, cattle, and sheep as reported by the Forest Service. Five sheep were considered the animal unit in combining the data. (Forest grazing permits are based on mature stock with no fee charged for suckling lambs, calves, or colts.) Many of the forest ranges are used for summer sheep pasture. The shift to a higher proportion of lambs in relation to mature sheep has been a factor in the reduction of numbers of mature sheep permitted on the forest ranges.

Data are not available on the weight, finish, and quality of the stock produced on the range, although the consensus of opinion seems to be that quality has been gradually improved through the introduction of pure bred and improved sires.

Interstate movements of stock could not be checked; in the States selected it was believed to be of minor significance as compared with the total number in the State.

Rainfall Data

Annual rainfall data were compiled from the reports of the Weather Bureau. Stations having continuous records from 1900 to date were selected in the various sections of the States, and the data combined in order to have a representative picture of changes in the annual rainfall in the State as a whole. The stations selected in each State are given in a note accompanying the figures.

Source and Limitations of Crop Feed Data

The Bureau of Agricultural Economics has recently completed a revision of its annual estimates of acreage and production of the important crops. These data were used. The total production of corn, oats, barley, tame and wild hay were converted to a feed unit basis, a pound of grain or two pounds of hay considered equivalent to such a unit.

Feed units available for the roughage-consuming animals were computed by deducting from the total feed produced a quantity sufficient to feed the hogs and chickens in the State. Feed consumption of the hogs and chickens was estimated by allowing 1,000 feed units for each hog on hand in January, and 50 feed units for each chicken. Straight line interpolation between census years was used for the years previous to the appearance of the annual estimates of hogs and chickens on farms made by the Bureau of Agricultural Economics. In some years the quantity of grain produced in the southwestern States was insufficient to provide the full 1,000 feed units per hog and 50 feed units per chicken. In such cases only the total grain produced was allocated to the hogs and chickens.

Feed units available from crops produced is but a rough indication of the amount of feed fed in any one year. Inventories of feed are carried over from one year to another, some feed is shipped into the State and other feed is shipped out. In recent years shipments of cottonseed cake into the range livestock areas has been increasing. Feed available in the form of beet pulp was not considered. Dairy cows and lambs in feed lots get a large

proportion of the beet pulp which is fed locally. Although dairying and the feed lot fattening of lambs and cattle has been increasing, particularly since 1920, no deductions have been made for the feed so used. The percentage of total feed used for such enterprises is small, and is probably offset by feed shipments into the range areas. Another reason for neglecting beet pulp was the fact that an unknown proportion of it is shipped out of the State.

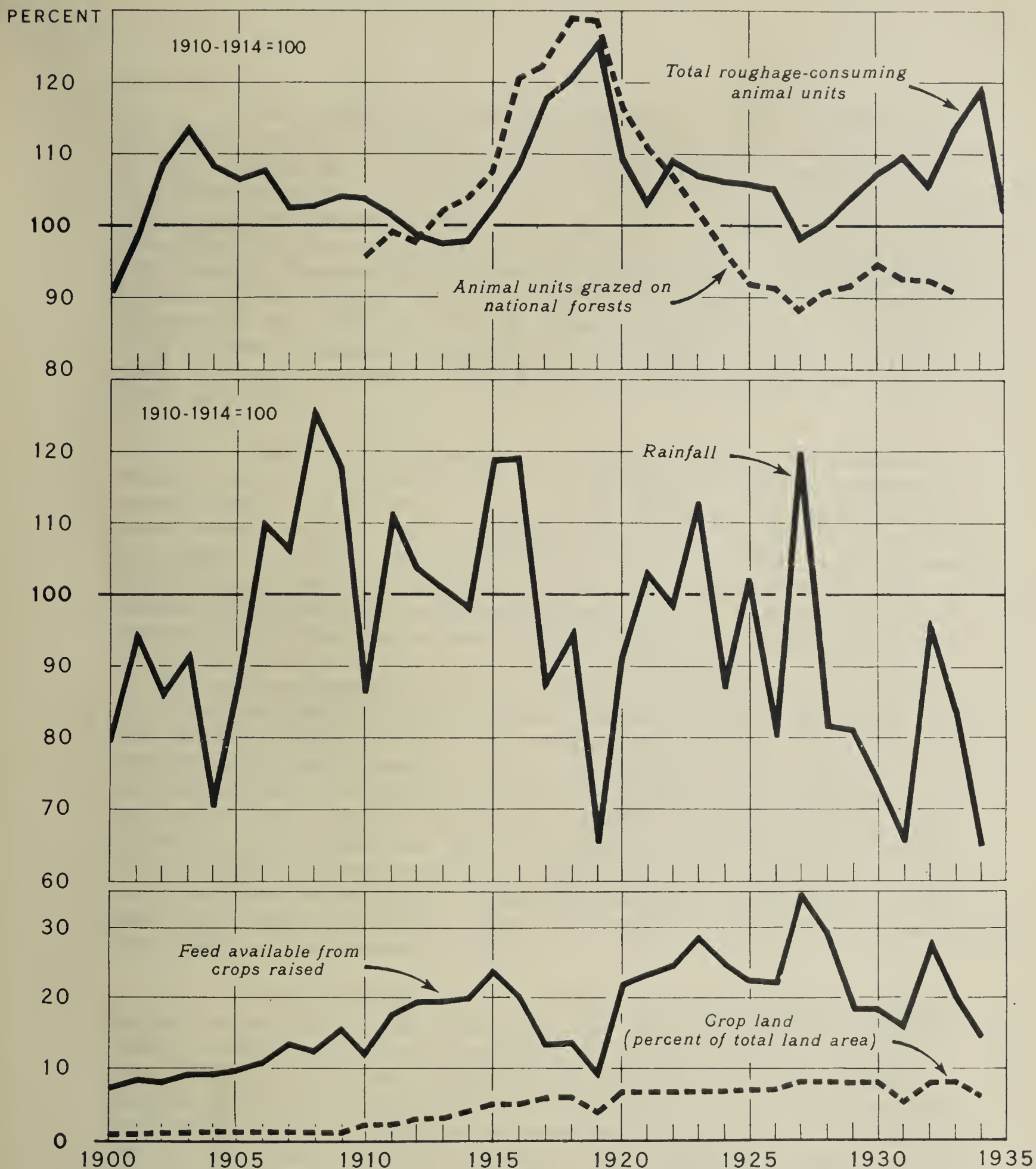
Feed produced on improved pastures, especially on irrigated pastures, has been used to supplement the range forage and crop feed. Although it is questionable how much more forage is produced on the unirrigated pasture land after it has been enclosed in farms than when it was unenclosed, there is probably some increase due to management. Irrigated pastures, however, produce many times as much feed as range lands; hence an increased acreage of irrigated pasture would be equivalent to increased crop production in supplementing the range forage. Statistics on irrigated land in crops are not available for 1900. Beginning in 1910 the census gives acreage irrigated and acreage of crops irrigated. It is pointed out in the census report that the data on acreage of crops irrigated is somewhat incomplete. This probably accounts for the fact that irrigated pastures appear to have decreased by over 50 percent between 1910 and 1930. (For the States of Montana, Wyoming, Arizona, Nevada, and New Mexico, acreage irrigated less acreage of crops irrigated was over 2 million in 1910, and less than 1 million in 1930.) In any event it appears that any increase in the acreage of irrigated pasture between 1900 and 1930 would account for but a negligible proportion of the feed requirements of the $7\frac{1}{2}$ million animal units on hand in these States in January 1930.

Trends in States

Montana

In order that all the data might be presented in graphic form on a comparable scale, the two series of roughage-consuming animal units, those permitted to graze on national forests and total numbers in the State, were converted to a percentage basis, using 1910-1914 as the base period. Annual rainfall data were similarly reduced to a percentage form. Data on feed units available per roughage-consuming animal unit from feed crops were changed to a percentage series by dividing by the estimated total feed requirements of a roughage-consuming animal unit. It was estimated that an animal unit would require 4,000 feed units in a 12-month period. Crop land was expressed as a percentage of the total land area of the State less land in parks. By throwing all these series into the percentage form, it is possible to make direct comparisons of their annual fluctuations as well as of their trends.

LIVESTOCK UNITS, FEED PRODUCTION, AND RAINFALL IN MONTANA, 1900-1935



U. S. DEPARTMENT OF AGRICULTURE

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Figure 1. Changes in the total number of range livestock in the State appear to have only an indirect relation to variations in rainfall and crop feed produced, except in the extremely dry years. Complete records of the number of livestock permitted to graze national forests have been kept since 1910. Changes in the net area of the national forests in Montana have been negligible since 1913. The annual rainfall data are an average of the observations at the following stations: Miles City, Red Lodge, Agricultural College, Dillon, Helena, Utica, Butte, Kalispell, Havre, Great Falls, Popular, and Springbrook. For an explanation of the terms and the treatment of the data, see the text.

The term "livestock" will be used to take the place of the longer phrase, "roughage-consuming animal units" in the balance of the discussion. It will be noted from Figure 1 that in 1900 livestock numbers in Montana were at their low point for the 36-year period. They reached a minor peak in 1903, and declined more or less steadily from then until 1914. From 1914 to 1919 livestock numbers increased in Montana by 27 percent. By 1927 they were back approximately to their 1914 level. Livestock numbers again increased by 21 percent from 1927 to 1934, but dropped 17 percent in the year 1934 so that estimated numbers on hand January 1, 1935 are very close to what they were in the low years, 1901, 1911-1914, 1921, 1927, and 1928.

There is no evidence of a secular decline in numbers. Neither is there any evidence of a very close relation between the annual changes in numbers and rainfall, although during several years severe drought was accompanied by a liquidation of livestock. The drought of 1919, for example, was associated with a 16 percent decrease in livestock numbers. In general, however, livestock numbers increased and decreased alternately for several years in succession, indicating an interrelationship with livestock prices.

It is apparent that the Forest Service permitted numbers of livestock grazed on the national forests to increase faster than they increased in the State as a whole from 1910 to 1919. The large numbers of animals grazed on national forests during the War period was the result of a national policy to increase food production, and was carried out against the better judgment of some Forest Service officials. Following the War they decreased the numbers permitted on the national forests even more drastically than numbers in the State as a whole declined. Since 1925 numbers permitted on the national forests in Montana have been smaller by several percent than they were in the pre-war period.

Rainfall in Montana is subject to wide annual variations. Periods of several years duration, such as 1900-1905, having an annual rainfall of 70 to 94 percent of the 1910 to 1914 average were followed by several years such as 1906-1909, with rainfall varying from 106 to 130 percent. Considering the period 1900-1934 as a whole, there appears to be very little evidence of a secular trend. If, however, 1906 is taken as the starting point, a declining trend is evidenced from 1906 to 1934. In general, the period 1906 to 1916 was characterized as a whole by more rainfall than for any other 10-year period. Likewise the period 1928-1934 was characterized by less rainfall than for any other seven-year period.

Feed available from crops raised shows an upward secular trend. Years of drought and of unusually heavy rainfall cause the annual data to fluctuate from the line of trend. It has already been pointed out that feed raised may have been supplemented, especially in drought years, by feed shipped into the State. It is also probable that hay and grain were carried over in the good crop years. It appears that feed available from crops raised may have increased in an amount equal to about 15 percent of the feed requirements of the range livestock in the post-war years as compared with the pre-war years.

Crop land has never accounted for as much as 8 percent of the total land area in the State. The increase in crop land, though fairly constant, amounted only to about 5 percent, when the post-war and pre-war years are compared.

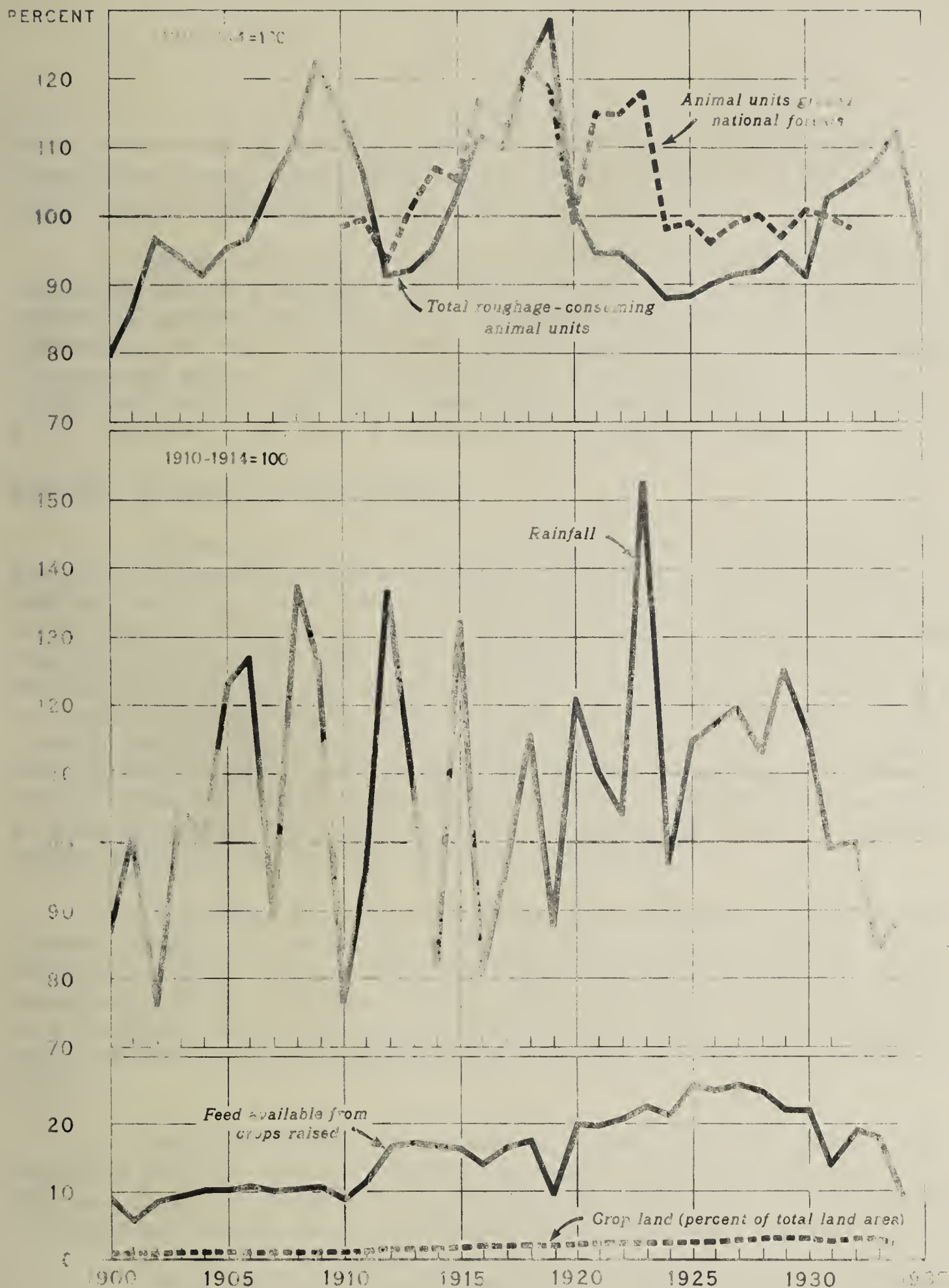
Wyoming

Livestock numbers in Wyoming reached a relatively high level in 1909 as a result of continuously increasing numbers of sheep for the several preceding years. This 1909 peak was followed by a decline of 31 percent in livestock numbers, the low point being reached in 1912. (See Fig. 2 ff.) The war period was accompanied by a 37 percent increase, culminating, as in Montana, in 1919, followed by a 40 percent decline to another low point in 1924. The increase in numbers from 1924 to 1934 was 24 percent. It is evident that livestock numbers have fluctuated more widely in Wyoming than in Montana, and that here again it is only in the exceptional year that the amount of rainfall can be definitely associated with the change in livestock numbers. When numbers are at a high level, a definite decline follows a year of markedly below average rainfall. The wide cyclical fluctuations make it difficult to determine whether or not there has been any tendency toward a secular decline in numbers. Any declining trend must be relatively slight.

Numbers of livestock permitted to graze on the national forests in Wyoming also fluctuated, but increased rather steadily from 1910 to 1918. With the exception of the year 1920, livestock on the national forests were not sharply reduced until 1924. Since that time they have been maintained at approximately the 1910-1914 levels.

Rainfall is highly variable in Wyoming. It is significant that the 11-year period 1920-1930 is characterized by the highest average rainfall and the smallest number of livestock for any similar period in the 36 years under consideration. Paradoxically, livestock numbers increased 22 percent in the years 1930-1934,

WESTERN ANIMALS, FEED PRODUCTION, AND RAINFALL IN WYOMING 1900-1935



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Figure 2. Although the trends of the various series show the same general relationship in Wyoming as in Montana, they differ in detail. The number of animals grazed on national forests in Wyoming have been somewhat better maintained in relation to 1910-1914 numbers than in Montana. This may in part be accounted for by the higher relative level of rainfall in post-war years compared with pre-war years than in Montana. Changes in the total area of the national forest since 1910 have been negligible. The annual rainfall data are an average of the observations at the following stations: Border, Lander, Cheyenne, and Laramie, and

with lower rainfall in 1931, 1932, and 1933 than for any three consecutive years since 1904. There does not appear to be a secular trend in rainfall for the period as a whole.

Feed available for range livestock from crop production increased almost steadily until 1930. This increase in crop feed available amounted to from 10 to 15 percent of the yearly feed requirements of the livestock when comparing the post-war period with the pre-war period. Crop land expressed as a percentage of the total land area of the State less land in parks is indeed small. At no time was more than 4 percent of the land in crops.

Arizona, Nevada, and New Mexico

Numbers of livestock in the three States of Arizona, New Mexico, and Nevada increased almost steadily from 1900 to 1908, declined a little from 1908 to 1911, and then resumed their upward trend, reaching a peak in 1917. This peak was several percent higher relative to the 1910-1914 base than the similar peaks reached in Montana and Wyoming livestock numbers. Numbers did not decline quite as rapidly as they did in the other two States, but an almost continuous decline was registered until 1929. Not only was the 1917 peak unusually high, but the 1928 trough was unusually low. From 1929 to 1934 livestock numbers were roughly 90 percent of the 1910 to 1914 average. Even at this level, however, they were somewhat higher than for the six-year period 1900-1905.

Livestock permitted to graze on the national forests increased sharply in conjunction with increases in the States as a whole up to 1918. Since 1918 the Forest Service has reduced the numbers permitted to graze on the national forests even faster than they declined in the States as a whole. By 1929 only 70 percent as many livestock were permitted on the national forests as in 1910 to 1914.

Rainfall in the three States of Arizona, New Mexico, and Nevada is highly variable, as is the case in the other Western States. Years of relatively high rainfall and years of relatively low rainfall follow each other without any apparent regularity.

Feed available from crops raised for the range livestock in these States was very small. Starting from a low of 6 percent of the total feed requirements available from feed crops in 1900, there was a gradual increase up to 10 percent in 1929. Less than one percent of the total land area of these States was devoted to crop production in any year.

LIVESTOCK UNITS, FEED PRODUCTION, AND RAINFALL IN ARIZONA, NEVADA, AND NEW MEXICO, 1900-1935



U. S. DEPARTMENT OF AGRICULTURE

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Figure 3. The war time peak in livestock numbers in these three States was higher in proportion to pre-war numbers than in Montana and Wyoming. They were also maintained for a longer period of years, but since 1925 declined almost to pre-war levels. The net area of the national forests in these three States has been reduced by approximately 9 percent since 1913. Livestock numbers permitted to graze on these forests have been materially restricted since 1921 in an effort to get down to a permanent carrying capacity basis. Feed available from feed crops has changed but little, and crop land represents less than 1 percent of the total land area of the States. The annual rainfall data are an average of the observations at the following stations: Mesa, Phoenix, Pinal Ranch, University of Arizona, Flagstaff, St. Michaels, and Prescott, Arizona; Reno and Winnemucca, Nevada; Albuquerque, Las Lunas, Santa Fe, Bell Ranch, Las Vegas, Roswell, Fort Stanton, Agricultural College, and Lordsburg, New Mexico.

Texas

Livestock numbers were relatively high in Texas at the turn of the century. By 1902 they had reached a peak which has not been equalled since. From the high point of 134 percent of the 1910-1914 base they declined to 96 in 1913. The wartime peak was relatively low -- 117 percent in 1915-1916 followed by a moderate slump in 1917 and 1918. Livestock numbers recovered and remained at relatively high levels 1920-1923, and then in 1928 declined to the lowest point in the 36-year period. From 1928 to 1934 they increased rapidly, reaching a peak in 1934 higher by 2 percent than during the war. Liquidations in 1934 amounted to 19 percent, bringing numbers back to 1910-1914 levels.

An average of the annual rainfall at 10 stations in the western part of Texas indicates that while it is somewhat higher than in the States previously considered, it is fully as variable. There appears to be a little closer relationship between livestock numbers and annual rainfall than in the other States, but it is still far from a close relationship.

Feed available from feed crops grown, although showing an upward secular trend, is much more variable than in the other States considered.^{1/} This is probably due to the lesser importance of irrigated crop production in Texas. The relatively high proportion of the total land area in the State in crops may be accounted for by the cotton production as well as the wheat and feed crops raised. The increase in the crop land was, to a large extent, at the expense of the better range pasture.

A comparison of the trend of livestock numbers in Texas and the other relevant data with the similar data for the public domain States indicates that numbers have not been maintained any better in Texas than elsewhere. This is in accord with the observations of range management specialists.

Qualitative Interpretation

What meaning or significance can be attached to these trends?

^{1/} The feed crops in Texas included grain sorghums in addition to corn, oats, barley and hay.

LIVESTOCK UNITS, FEED PRODUCTION, AND RAINFALL IN TEXAS, 1900-1935



U. S. DEPARTMENT OF AGRICULTURE

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Figure 4. Unlike the public domain States, livestock numbers in Texas were at a relatively high level 1900-1905. The war time peak was low, and the 1934 peak high as compared with the other States. Feed available from crops raised has shown a slight upward trend. The annual rainfall data are an average of the observations at Big Spring, Crosbyton, Plainview, El Paso, Fort Clark, Fort McIntosh, Abilene, Fort Worth, Austin, and San Antonio.

Most of the accumulated feed of the range country had been grazed off by 1890. Droughts in the 'nineties caused stock losses and reduced numbers on the range similar to the more recent droughts. David Griffiths' writing in 1901 speaks of over-grazing being rather general, and especially bad in southern Arizona.^{2/} While the range was probably fully stocked by 1890, lack of water in certain areas made it impossible to graze off the forage. The development of water holes and the utilization of forage farther away from the natural watering places has been a gradual result of competition for a limited amount of forage. Just how important this has been in the bringing into use of new range land since 1900 is difficult to estimate. Men familiar with the range country are not inclined to estimate the increased range made available since 1900 by such methods at a very high figure.

The shifting of the range livestock industry to the production and sale of younger animals has been discussed earlier. It seems questionable as to how this change affected the ratio of the grazing load on the range to the number of animals on farms and ranches in January. Probably any change has been very slight. The feed available from crops raised is but an indication of a trend toward the utilization of more hay and grain to supplement the range forage. It is probably a very good indication, however, for taking the States as a whole, only a small percentage of the total feed used is shipped either into or out of the State. Much of the grain and concentrates shipped into the range country is used to fatten the stock or to put the young stock in better flesh before shipping them to the Corn Belt rather than for wintering stock to be run on the range the following summer.

It seems probable that feed production for the wintering of range livestock has increased from 1900 to 1935 to the extent that approximately 10 percent more than formerly of their annual feed supply is now received from this source. The southwestern States and Texas have increased hand feeding only slightly in so far as corn, oats, barley, and hay are concerned, but have increased somewhat the feeding of cottonseed cake. How much of this cottonseed cake is used to supplement range forage, and how much is used in the feed lots is problematical. The northern States have probably increased their hand feeding by an amount equivalent to slightly over 10 percent of the yearly ration. Land taken out of the range for crop production probably offsets this to the extent of about two percent.

The relative maintenance of livestock numbers in these range States over the 36-year period does not mean that the quality

^{2/} "Range Improvement in Arizona", by David Griffiths. U.S. Department of Agriculture, Bureau of Plant Industry, Bulletin 4.

and quantity of range forage has been fully maintained. In view of the wide cyclical fluctuations in the livestock numbers on the range, it is apparent that current rate of stocking has little relation to long-time carrying capacity. Current reports indicate that range depletion and deterioration has been general over most of the range country. The continuation of large numbers of stock on the range in spite of reports of the disappearance of the more desirable forage plants suggests the hypothesis that the decline in the quantity and quality of forage, although going on through the years, has not yet been sufficiently serious actually to reduce the rate of stocking.

Progressive reduction in the quality and quantity of forage plants on the range must eventually make itself felt in total numbers of livestock grazed in these States. Roughage-consuming animal units in southern Iowa and northern Missouri, a farming country which has been pastured much longer than the range, have been declining at an increasing rate since 1900. The rate of decline in the decade 1920 to 1930 was more than twice as rapid as the decline during the decade 1900-1910. Approximately one-half of the farm land was in pasture, mostly permanent. That declining pasturage has been an important factor influencing the decline in livestock numbers seems evident from the reports of pasture shortage in this area in recent years.

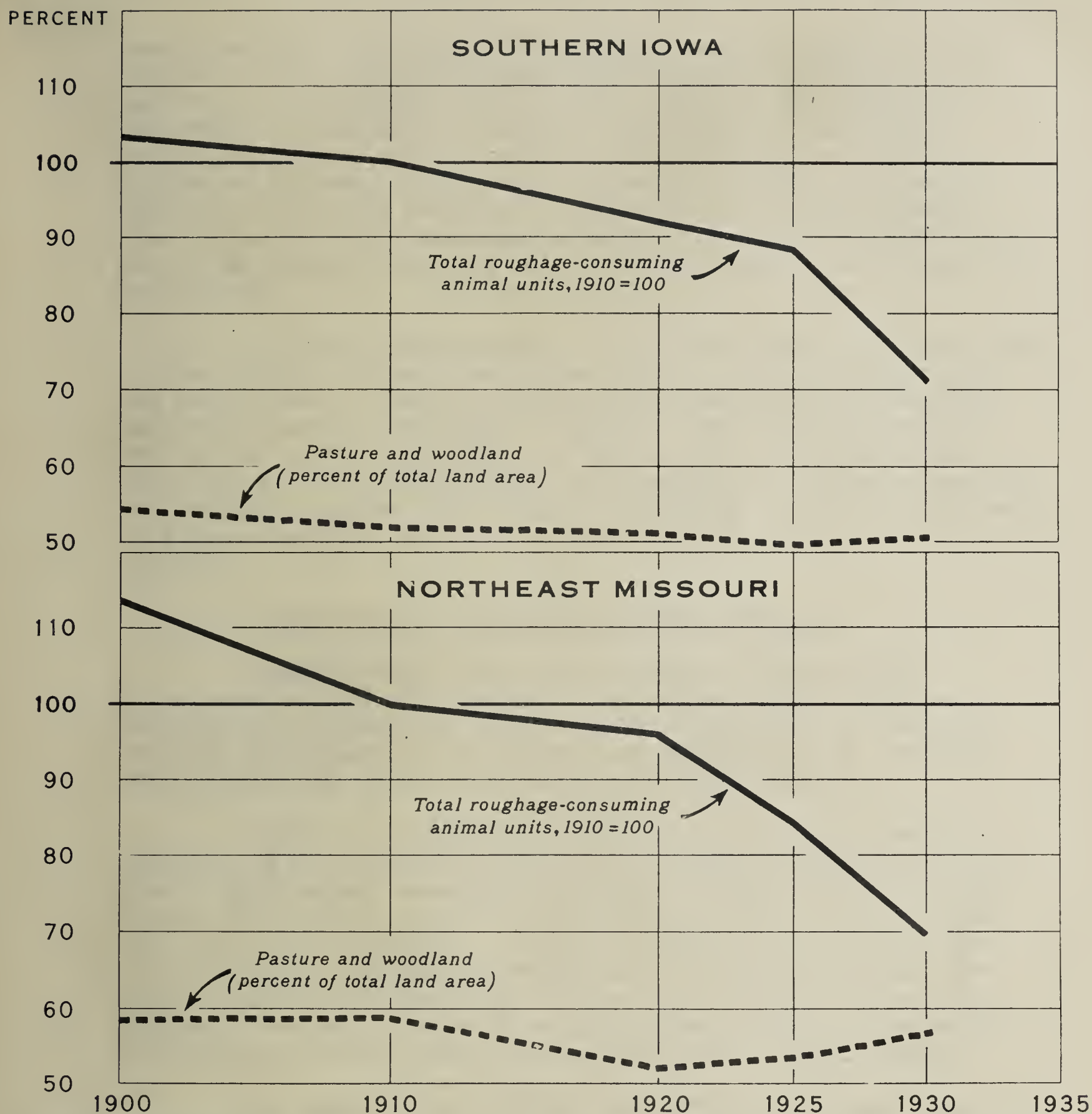
Natural conditions are more conducive to pasture deterioration in southern Iowa and northern Missouri than in the range country. For that reason the trends shown in Figure 5 (ff) are not expected to be duplicated in the Western States. They are indicative of what has happened in an older, more productive area, however.

Future changes in the age and quality of livestock marketed from the range are likely to be less than the changes taking place since 1900. Particularly, there seems little possibility of any material increase in the efficiency in meat and wool production through changes in the age of marketing. The National Resources Board reports 7 million acres additional irrigable area with estimated costs of reclamation of \$100 an acre or less in the seventeen Western States.^{3/} Irrigated land increased by over twice this amount from 1900 to 1930 without increasing feed available for the range livestock by more than approximately 10 percent. For this reason it does not seem probable that increases in irrigation may be expected to figure heavily in maintaining or increasing range livestock numbers in the future.

Numbers of livestock permitted to graze on the national forests are now smaller than they were in 1910 to 1914. It is

^{3/} National Resources Board Report, Part II. Report of the Land Planning Committee, p. 129, Table 9.

TOTAL ROUGHAGE-CONSUMING ANIMAL UNITS, PASTURE AND WOODLAND IN SOUTHERN IOWA AND NORTHEAST MISSOURI



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Figure 5. Livestock numbers have been declining since 1900. Animal units are in terms of percent of census numbers in 1910 adjusted to a January basis for those years when the census was taken at another date. Pasture and woodland is given as a percent of total land in farms in 1910. Pasture and woodland can be separated in the more recent census tabulations, but not in the earlier ones. Pasture accounted for over 80 percent of the total land under the combined heading "Pasture and Woodland" in these counties in 1930. The counties included are: Appanoose, Clarke, Davis, Decatur, Des Moines, Henry, Jefferson, Lee, Lucas, Monroe, Van Buren, Wapello, Wayne, and Ringgold in Iowa; Adair, Clark, Daviess, Grundy, Garrison, Knox, Lewis, Linn, Macon, Mercer, Putnam, Schuyler, Scotland, and Sullivan in Missouri.

recognized that the Forest Service permitted overstocking of their ranges as a temporary war measure, 1915 to 1919. Reduction in numbers in the 15 years since the War, together with management of the ranges has resulted in material improvement of the forest ranges as compared with the public domain, but has not resulted in sufficient improvement to permit increasing the rate of stocking. Numbers of livestock permitted to graze on the national forests even before the 1933-34 drought were still showing a downward trend, and it is reported that they will be further reduced as a result of the drought.

A careful consideration of all these pertinent facts leads to the conclusion that probably the rate of stocking the range for the period 1925 to 1935 as a whole was in excess of its long-time carrying capacity even under management. This is almost surely true of the period 1930-1935. If this be true, then management of the range and the prevention of soil depletion is needed to conserve the present resources, and to make it possible over the longer period of time to maintain livestock numbers as nearly at present levels as possible.

Significance in Regional Land-Use Planning

Farmers change their farm production plans slowly. Adjustments in land use come about gradually. Regional land-use planning and the adoption of governmental policies to effectuate regional adjustments in the use of land recognize this. Planning and policies are adopted today looking toward tomorrow.

Since the range country is such an important livestock producing area, a probable decline in the rate of production is of great significance. Assuming the demand for beef and lamb to increase with population over the next twenty years, more production, not less, will be demanded. It seems apparent that policies and long-time plans for land-use adjustment in other agricultural regions of the United States should take into account the fact that they will have an opportunity to contribute a larger proportion of the nation's beef and lamb than has been true in recent years.

It seems evident further that efforts to conserve resources in conjunction with efforts to control production in the years immediately ahead will be well repaid, if ways and means are explored to reduce further and hold down to conservative levels the number of livestock on the range.

If the conclusions reached in this analysis are sound, pasture land in other sections of the United States may be expected to increase in economic value relative to their physical

productive capacity and the placing of any potentially productive pasture land to other less productive uses should be seriously questioned. Evidence of the declining productivity of pastures in the humid sections of the United States (not reviewed here) further substantiates the conclusion that an increasing demand may be expected for lands adapted to forage production during the next 25 years.

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RECENT PUBLICATIONS AND ARTICLES

Periodical Articles

"Land Resources: The Taylor Grazing Act". Virgil Hurlburt.
JOURNAL OF LAND AND PUBLIC UTILITY ECONOMICS. XI (2) 203,
May 1935.

There has never been a law to meet adequately the needs of the stock farmer of the Great Plains, since the fundamental policy running through our past land laws has been the creation of a large number of farm homes by the transfer of public domain to private ownership, the author believes. "In several Western States", moreover, "over half the total land area has been homesteaded", and "with but few exceptions, one being lands in reclamation projects, the size of tracts granted has been too small."

If the arid and semi-arid lands were owned by resident stockmen in units sufficiently large, there would probably be no need for regulation, but the "hit-and-miss", checkerboard pattern of land ownership has made some method of range control necessary, and this control the Taylor Act hopes to supply.

In commenting on the significance of the Act, the author notes that only one of the provisions, the establishment of the grazing district, is new. Permit issuance follows the practice of the Forest Service; recognition of preference is a policy found throughout national land laws; the leasing feature is only a wider application of the principles followed in use of mineral lands; while the exchange of lands between Federal and State governments has been going on for many years.

Public Attitude

In attempting to make an appraisal of public attitude toward the Act, the author concludes that there is opposition, but that the livestock industry favors the act in so far as its provisions favor individual ranchmen, but until the range has been much improved, no fees can be paid for grazing privileges. Immediate improvement is recommended through CCC or PWA projects.

"Population Movements in Canada 1921-31". Hurd, W.B., and Cameron, J.C. CANADIAN JOURNAL OF ECONOMICS AND POLITICAL SCIENCE 1(2) 222. May 1935.

An attempt was made, in an earlier paper by W.B. Hurd entitled, "Population Movements in Canada 1921-31 and their Implications", "to isolate certain major population movements in Canada during the last intercensal decade, and to demonstrate their bearing on the current situation in and the future outlook for, the country as a whole." Provincial data available subsequent to the appearance of the first article have made possible the elaboration of the preceding analysis.

Part I summarizes the findings: (1) a net rural-urban movement amounting to about 437,000 all ages occurred in Canada 1921-31; the cityward migration being heavier in eastern Canada where birth rates are high and in the maritimes, where rural employment generally declined. Very probably surplus rural population will be very much larger during the present decade, especially in provinces with high birth rates. (2) In June 1931 the estimated number of urban residents economically unassimilated exceeded the net rural-urban movement for the decade by twice or more. Assuming a rural surplus of the same moderate dimensions as in the last intercensal decade, an estimated minimum expansion of 45-50 percent in urban employment would be required in the current decade to absorb the expected rural excess in addition to the normally accruing urban natural increase, and the survivors of the urban residents who were unemployed at the beginning of the decade. (3) During the last decade radical change has taken place in both geographical and rural-urban immigration distribution; net immigration was predominantly urban, but both rural and urban immigration were predominantly to eastern Canada. (4) For every province both rural and urban net immigration from abroad included disproportionate percentages of males.

"The evidence of this regional study confirms the conclusion that a migrating population, whether male or female,

Canadian or foreign-born, consists for the most part of young adults at the most productive ages, and consequently, of the economically most important sections of our population."

"The Flight from the Fields", Sir Daniel Hall. NINETEENTH CENTURY AND AFTER. 117 (699) 533.

Census figures for the last 60 years for England and Wales show a continuous decline in the numbers engaged in agriculture. While the number of independent farmers has been maintained relatively constant throughout the entire period, the number of employees (laborers on a weekly wage) declined at the rate of about 10,000 a year except during the decade 1901-11. From 1871-1931 numbers shrank 48 percent, and the area of cultivated land shrank about 1,000,000 acres, or 4 percent.

The author concludes by saying, "... the decline in the number of men employed upon the land has, within the last 60 years, been very great; at the same time the small farms have been diminishing in numbers, in spite of the legislative attempts to restore them. The small mixed farm has become definitely uneconomic in Britain, as in most Continental countries, and every year of progress, every invention of science and machinery, increases the efficiency of the large farm as compared with the small. Further employment upon the land is to be obtained, not by a return to earlier conditions of subdivision, but by an intensification of the methods of production on larger units of cultivation..."

"The German Back-to-the-Land Movement". Karl Brandt. JOURNAL OF LAND AND PUBLIC UTILITY ECONOMICS. XI (2) 123. May 1935.

The writer sketches briefly but adequately the movement from farm to city in Germany followed more recently by the back-to-the-land movement, analyzing the reasons for both movements. The city became obviously unable to live up to its responsibilities, with unemployment and the dole appearing as two results. The people, the author says, "went to the country to escape the destiny of degradation", where "they could create something with their labor to supply their own needs."

The gradual change of attitude of the entire nation toward the agrarian population is also described. Farmers are now "a superior class and superior stock to whom destiny has entrusted more vital interests than to any other group."

Books and Bulletins

Books

Mackintosh, W.A. PRAIRIE SETTLEMENT: The Geographical Setting.
Dawson, C.A. THE SETTLEMENT OF THE PEACE RIVER COUNTRY.

The Canadian Pioneer Problems Committee has sponsored nine volumes on Canadian frontier settlement, covering settlement in Canada during the 20th century, especially on the Great Plains. The above are two of the series, and have been very briefly reviewed by Loyal Durand Jr. in the JOURNAL OF LAND AND PUBLIC UTILITY ECONOMICS XI (2) 207 for May 1935. Macmillan Company of Toronto are the publishers.

Bulletins

Report of the Committee on the Upper Monongahela Valley West Virginia to the Secretary of Interior. 1935. Mimeographed.
(Reviewed elsewhere in this issue.)

Report of Minnesota State Planning Board. St. Paul. 1935.
(Reviewed elsewhere in this issue.)

"Land Redemptions." "Effect of Proposed Homestead Exemption".
From STUDIES OF LEGISLATIVE PROBLEMS IN ALABAMA, by Committee on Government Research, Bureau of Business Research, University of Alabama. Mimeographed series No. 5, Pt. 2.

The report on land redemptions is concerned especially with the problem of returning to the tax rolls real estate which the State of Alabama has acquired at tax sales, and is based on the assumption that permanent reform rather than temporary relief is to be desired. The nature of the causes of tax delinquency have been studied, as well as the extent of the problem of land redemptions.

One part of the report consists of a summary of the legal provisions of the various States covering tax delinquency, sales, and redemptions; another discusses the extent of the problem in other States; a third is a summary of growth and present status of the problem in Alabama. The conclusions, occupying part 4, are of interest. (1) Alabama legal provisions affecting tax delinquency, sales tax and land redemptions are in line with those of other States; (2) tax delinquency in Alabama is relatively moderate; (3) non-uniformity of tax delinquency among counties may have several explanations:

- (a) large amounts of marginal land - is continuation of private ownership desirable; if not, how should State use land;
- (b) inequitable assessment;
- (c) government costs are too high; county consolidation, more State aids, etc., may be necessary here.

The large number of periodically recurring delinquencies, though unimportant in total value, is a symptom of grave defect in fiscal policy and administration of State tax laws.

A final section concerns the proposed homestead exemption and its probable effect on tax revenues, with Tuskaloosa County used as an example. Homestead exemption with \$1200 amount limitation is estimated to bring about a decrease in ad valorem taxes in Tuskaloosa County of 18.12 percent; for the city of Tuskaloosa as much as 20.19 percent.

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LEGISLATION AFFECTING LAND USE

Congressional Activities

Following is the status of the chief bills affecting land utilization at the close of the first session of the 74th Congress, August 26:

Public 320 (H.R.8492) amends the Agricultural Adjustment Act. Approved August 24, 1935.

S.2367 to establish the Farmers' Home Corporation to aid in providing farms for tenants and share croppers, has been passed by the Senate, and is now in the House Committee on Agriculture.

H.R.3019 to amend the Taylor Grazing Act has passed both Houses with amendments, and awaits the President's action.

H.R.6914, to aid the States in acquiring land for State forests, as amended by the Senate, has been adopted by the House, and has gone to the President.

H.R.8632 to amend the Act creating the Tennessee Valley Authority. Conference Report adopted by both Houses August 21, 1935.

AGRICULTURAL ADJUSTMENT ADMINISTRATION

Public 320 (H.R.8492) Amends the Agricultural Adjustment Act. As finally adopted Section 32 is retained, which appropriates 30 percent of the gross tariff receipts for (1) benefit payments for the export of agricultural goods; (2) benefit payments to encourage domestic consumption; and (3) to finance adjustments in production.

See also SUBMARGINAL LAND RETIREMENT.

GOVERNMENT REORGANIZATION

S.2665. To change the name of the Department of the Interior to the Department of Conservation and Public Works, and to authorize the transfer of agencies dealing with conservation work to that department by executive action, subject to the approval of Congress. Reported favorably by the Senate Committee on Public Lands. Action postponed until next session.

S.3288. To provide for the consolidation of the Branch of Forestry in the National Park Service ^{in the} / Department of the Interior; the Bureau of Agricultural Engineering, Forest Service, and Soil Conservation Service ^{in the} / Department of Agriculture; the Forest Division of the Tennessee Valley Authority; the Civilian Conservation Corps camps of the TVA, the Emergency Conservation Work, (an independent establishment) the Civilian Conservation Corps camps in the Departments of Agriculture and Interior and Civilian Conservation Corps camps conducted jointly by the States and the Federal Government and all other CCC camps and soil erosion activities of all departments and independent agencies in the Bureau of Forestry of the Department of Agriculture.

GRAZING ADMINISTRATION

See PUBLIC LANDS.

INDIAN LANDS AND ADMINISTRATION

S.2803. To authorize the sale of restricted lands between Indians and the conveyance of restricted lands to corporations for public purposes.

IRRIGATION AND RECLAMATION

H.R.8492. To amend the Agricultural Adjustment Act. An amendment to provide that where there exists in any Federal reclamation projects submarginal lands against which there are obligations to the Federal Government, such submarginal

lands may be eliminated from such projects, and any reclamation charges against such land be cancelled. Adopted by Senate, but eliminated in conference.

LAND ACQUISITION.

S.3250. To prohibit the acquisition by the United States of any land located in any State without the consent of such State.

LOCAL GOVERNMENT

S.3234. To provide for the payment to each municipality, county, parish, township, unincorporated tax or special assessment district, school, drainage, irrigation, reclamation, levee, sewer, paving, sanitary, port, improvement or other district in which lands in private ownership have been or are hereafter acquired by the United States, an amount bearing the same proportion to the indebtedness of such taxing district outstanding at the time of acquisition as the value of the lands so acquired bore or bears to the value of all the lands in the taxing district.

NATIONAL FORESTS

H.R.8785. To authorize the exchange of National Forest land for privately owned land and the transfer of public owned lands to National Forest status in an area comprising 207,000 acres adjacent to the Willanette National Forest, Oregon.

Public No. 227. (H.R.3061). To extend the boundaries of the Chelan National Forest, Washington, a distance of four miles from their present location, and to authorize the transfer of public lands within the added area to the National Forest and the exchange of privately owned lands for National Forest land or timber. Area affected is 383,000 acres. Approved August 2, 1935.

S.3321. To add one section to the Mount Hood National Forest, Oregon.

See GOVERNMENT REORGANIZATION.

NATIONAL PARKS

S.Res.102. To direct the Committee on Public Lands to investigate the advisability of establishing additional national parks and monuments and proposed changes in boundaries of existing parks. Passed July 30, 1935.

S.739. To provide for the establishment of a national monument on the City of Fort Stanwix, New York. Passed Senate, 7-29-35; House 8-14-35.

S.997. To provide for the establishment of a national monument on the estate of Patrick Henry, Red Hill, Virginia.

Passed Senate 7-29-35; House 8-6-35.

H.R.4507. To provide for the establishment of the Appomattox Court House National Historical Park, Virginia. Passed House, 6-5-35; Senate, 7-29-35.

S.32. To provide for the establishment of a national military park at Saratoga, New York. Passed Senate, 7-30-35.

H.R.5368. To provide for the enlargement of the Chalmette National Monument, Louisiana, and for its establishment as the Chalmette National Historical Park. Passed House, 7-15-35.

See SUBMARGINAL LANDS.

PUBLIC LANDS

Public No. 222 (S.1065). To further extend the time in which final proof may be offered by homestead and desert land entrymen. Approved 7-26-35.

H.R.3019. To amend the Taylor Grazing Act to provide that:

- (1) 142,000,000 acres of public lands may be placed in grazing districts.
- (2) Authorizes classification of public lands and opens those more valuable for agriculture than grazing to entry in tracts of 320 acres.
- (3) Authorizes acceptance of gifts of land within grazing districts and exchange of publicly owned lands without for privately owned lands within such districts.
- (4) Directs that Secretary of the Interior shall proceed as rapidly as possible with exchange of State owned lands within for publicly owned lands without grazing districts. Reduces fees for same.
- (5) Authorizes leasing of isolated tracts in unrestricted amounts.
- (6) Grants to the States all vacant, unappropriated and unreserved non-mineral lands in tracts of 760 acres or less which at the expiration of two years after adoption of this Act are not included within grazing districts or leased. Passed House and Senate.

Public 285. To repeal the provisions of the homestead laws requiring cultivation of land. Approved 8-19-35.

RECLAMATION

S.3292. To provide for the establishment of the Mid-Continent Reclamation Commission to impound, conserve, and make use of the unappropriated waters of the eastern slope of the Rocky Mountains.

STATE FORESTS

H.R.6914. To provide for cooperation with the States in the acquisition, development and administration of State forests, and to authorize the appropriation of not to exceed

\$5,000,000 for this program. Passed both houses and sent to the President.

SUBMARGINAL LAND RETIREMENT

Public 320. (H.R.8492) To amend the Agricultural Adjustment Act. Section 55 makes available from Work Relief funds such amount of money "as the President may allot for the development of a national program of land conservation and land utilization. The sums so allotted may be used ... for the acquisition of submarginal lands and their use for such public purposes as the President shall prescribe."

H.R.3019. To amend the Taylor Grazing Act. Amended by the Senate to authorize the President to include in the proposed Badlands National Monument certain lands which are designated by the Resettlement Administration as submarginal.

H.Res.358,359. "To further the development of a national program of land conservation and utilization." Would authorize the appropriation of \$50,000,000 for the acquisition and retirement of submarginal agricultural land. For all lands so acquired taxes would be paid to the political subdivisions in which they are located at the rates previously assessed, but authority for reducing assessments is given. (This measure was offered as an amendment to H.R.8492, but was dropped in favor of the substitute above mentioned.)

TENNESSEE VALLEY AUTHORITY

H.R.8632. To grant certain additional powers to the Tennessee Valley Authority. Conference report agreed to 8-21-35, and bill sent to the President.

State Legislative Activities

FLORIDA

H.B.163. Provides for the creation of county delinquent tax adjustment boards and boards of appeals, and for the compromise and adjustment of tax sales certificates held by the State. Approved.

H.B.115. Provides for redeeming tax delinquent lands. Approved.

S.B.163. An Act prescribing the method by which tax delinquent lands may be sold and the deeds obtained. Approved.

S.B.561. Authorizes the Florida Board of Forestry to acquire by gift, donation, purchase or otherwise from the Federal Government or private individuals lands suitable for State Forests or Parks, and appropriates \$100,000 for the purchase, development and management of such lands for the next biennium. Approved.

S.B.955. Appropriates \$25,000 for expenses of the Everglades National Park Commission. Approved.

S.B.956. An Act setting aside a portion of the area contained in the proposed Everglades National Park for a wildlife refuge and wilderness area. Approved.

ILLINOIS

H.B.1146. To authorize the Department of Public Works to accept transfer by patent from the United States, such right, title or interest as may be granted to lands that are to be used for parks, and to enter into agreements and cooperate with the United States in matters relating to the use or administration of lands for parks transferred for such purposes.

NEW JERSEY

An act to establish a New Jersey Water Authority and defining its powers. Approved.

S.311. Authorizes the acquisition of land within the State by the United States for use by the State for forestry, watershed, wildlife and public recreation purposes. Approved.

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Resettlement Administration
Washington

LAND POLICY CIRCULAR
SUPPLEMENT

October 1935

LAND SETTLEMENT TECHNIQUE ABROAD

II. Financing of Full-time Farming Settlement in
England, Germany, Denmark, Norway,
and Sweden

By
Erich Kraemer

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The LAND POLICY CIRCULAR is issued by the Division of Land Utilization, Resettlement Administration, in cooperation with the Division of Land Economics of the Bureau of Agricultural Economics. Its purpose is to provide technical information in the field of land economics to assist the staff of the Resettlement Administration and its cooperating agencies and groups to keep in touch with current developments bearing upon their work. Its pages will serve as a clearing house for information concerning local, State, and Federal land planning activities and research.

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Foreword

This is the second of a series of discussions of Land Settlement Technique Abroad. The first number of this series was devoted to a description of organization of full-time farming land settlement activities in England, Germany, and Italy; the present deals with the methods of financing full-time farming settlement in England, Germany, Denmark, Norway, and Sweden.

It will be noticed that a somewhat different grouping of countries has been made. This is in line with the plan of selecting, in connection with the treatment of the various land settlement problems, for each article such countries as seem to be particularly fitted for the purpose of describing the different phases of a given problem.

The author wishes to thank Miss Elizabeth R. Hooker for her assistance in the collection of material on England and the Scandinavian countries, and Miss Esther K. Thompson for her help in the gathering of information about certain Scandinavian laws.

LAND SETTLEMENT TECHNIQUE ABROAD

By
Erich Kraemer
Division of Land Utilization
Resettlement Administration

II. Financing of Full-time Farming Settlement in England, Germany, Denmark, Norway, and Sweden

In the course of land settlement operations in England (and Wales), Germany, and the three Scandinavian countries -- Denmark, Norway, and Sweden -- capital requirements for the establishment of new full-time farms have been determined largely by the type of land settled, the kind of holdings established, the type of settlement organization, the prevailing price levels for labor and materials, the degree to which the holdings were prepared before they were turned over to the settlers, and the size of the settlement programs. Some of these factors have been similar; other factors, particularly the type of holdings developed, the degree of preparing the holdings prior to occupation by the settlers, and the size of the settlement programs have differed considerably. It is also true that the degree of these differences has varied from time to time. All this must be kept in mind when the financing problems are considered.

Some figures will be given to show how much capital has been needed for the various settlement operations in the different countries. These figures, however, are somewhat incomplete, and can serve only as a rough indication of what it has cost to establish new holdings, or to carry through an entire land settlement program.

England

With respect to the cost of individual holdings, the data at hand for England show that in the period from 1919 to 1926 the average capital outlay on the part of local settlement authorities amounted to about 900 pounds.^{1/} From 1926 to 1931

^{1/} Ministry of Agriculture and Fisheries, Small Holdings and Allotments, Memorandum on Financial Resolution, 1926, Cmd. 2697, 23:981, p.3.

Rates at which this amount and other similar figures in foreign currency may be converted into American dollars are given in Table 18 at the end of this article.

2/

it amounted to about 1,265 pounds per holding. At the time when the Agricultural Land (Utilization) Act of 1931 was discussed, it was estimated that the capital cost of a farm up to 50 acres would be around 1,100 pounds, and that the expenditure for smaller holdings up to about 5 acres would be approximately 640 pounds.^{3/}

Germany

On the basis of data furnished in a report on agricultural settlement in Germany submitted by a Federal Inquiry Committee in 1930, the average price of a new holding of 30-50 acres in eastern Germany, before the World War, between 1924 and 1928, and in 1928, was as follows:

Table 1. Price of New holdings established in Eastern Germany by semi-public land settlement agencies, before the World War, 1924-28, and in 1928.^{4/}
(For rates of exchange see Table 18, end of article)

Time	:	Approximate total price of holding ready for occupation by settler, inclusive of buildings, equipment, and crops (in marks)
Before the World War	:	33,000 - 47,000
1924-28	:	32,000 - 45,000
1928	:	33,000 - 48,000

No such average figures as have been quoted for England and Germany are available for the Scandinavian countries. With respect to the latter nations it is, however, possible to quote some of the maximum values which various land-settlement acts fixed for new holdings. These values can serve very well as an indicator of how much capital has been needed per unit both before and after the World War. They are as follows:

-
- 2/ Ministry of Agriculture and Fisheries, Report of the Work of the Land Division, 1932, p. 7.
 - 3/ Parliamentary Debates, Commons, 1931, 244: 1907 and 1958; also Viscount Astor and Keith A.H. Murray, Land and Life, the Economic National Policy for Agriculture, 1932, p. 14.
 - 4/ Das laendliche Siedlungswesen nach dem Kriege, Unterausschuss fuer Landwirtschaft, Band 10, Berlin 1930, p. 51. Prices given in the report are per unit of 1 hectare. See also Table 9 of this article.

Table 2. Maximum values of new agricultural holdings as established by land settlement acts in Denmark, Norway, and Sweden, 1899-1934^{5/}
(For rates of exchange see Table 18, end of article)

DENMARK		:	NORWAY		:	SWEDEN	
Date of Act	:Maximum value: :in Danish : crowns	:	Date of Act	:Maximum value: :in Norwegian : crowns	:	Date of Act	:Maximum value: :in Swedish : crowns
3-24-1899	4,000						
			6-9-1903	3,000			
4-22-1904	5,000					6-17-1904	5,000
						6-13-1908	5,000-6,000 ^a
4-30-1909	6,500-8,000 ^a						
						1910	7,000
						1912	8,000
6-13-1914	8,000-10,000					6-14-1914	8,000-10,000 ^a
			7-23-1915	4,500-5600 ^a			
4-11-1916	18,000-20,000 ^a						
6-22-1917	10,000-12,000 ^a						
2-19-1918	10,000						
2-12-1919	10,000						
						1920	12,000;15,000 ^c
5-6-1921	22,000						
8-7-1922	20,000						
3-29-24	21,000						
			5-8-1925	15,000;25,000 ^b			
4-4-1928	27,000					6-8-1928)	12,000-16,000 ^a
						)	15,000-20,000 ^c
			6-24-31	15,000-20,000			
1934)	16,500						
)	17,000 ^d						
)	45,000 ^e						

- a. The higher figure applies to exceptional cases.
b. The larger amount refers to settlement on land requiring reclamation.
c. Settlement on land without buildings.
d. Market gardens.
e. Larger holdings.

In the case of Denmark only those from 1909 on, in the case of Sweden only those of the acts since the World War, and in the case of Norway only those of the most recent legislation apply to full-time farms. Those previously enacted refer to part-time farming settlement,

^{5/} Data from acts quoted.

and are given in this report for the purpose of comparison. The early Scandinavian laws mentioned were measures to foster the settlement of agricultural workers on part-time holdings. The later laws became enactments covering both full-time and part-time settlement due to the addition of full-time farming. It also happened that in the later acts, since the dates mentioned, increasing emphasis was laid upon full-time farming settlement. In connection with these developments and due to the fact that full-time farming settlement is the more expensive type of settlement, the highest values given in the later acts apply to full-time farms.

The funds which have been available for meeting these capital requirements have been either settler funds, non-settler funds, or both types of funds. The degree to which the settlers' own funds have participated has depended mainly on the tenure arrangement contemplated (that is, depending upon whether the new holdings were to be sold or rented to them), the extent of subsidization, and the extent to which the settlers have fulfilled their payment obligations. At the time of occupation of the holdings, it has been mainly determined by the tenure arrangement and the amount of capital which the settlers were able to muster at that particular moment.

The problems which have come up in connection with the meeting of these capital requirements may be conveniently divided into three groups, namely those concerning the creation of funds, those regarding the disposal of funds, and those relative to the collection on loans. How non-settler funds have been created will be shown first.

Creation of Non-settler Funds

As a rule, individual settlers have not been able to furnish all the capital required. Particularly in periods of depressed economic conditions, and during the period immediately following, the number of persons who have been able to furnish all or a substantial portion of the capital requirements has been rather small.

Experience has also shown that cooperative funds, created in connection with the application of the principle of self-help in land settlement, have usually not been sufficient to make the cooperative land settlement associations independent of outside funds. The main reason for this has been that usually the membership of cooperative associations has been made up of persons with moderate means.

If no funds from other than settler sources were supplied, and the settlers were required to furnish all the necessary capital themselves, an insuperable barrier would have been erected against settlers who, although otherwise suitable, possessed only a small amount of money. This, for social and other reasons, the various countries concerned have attempted to avoid, by the arrangements which they have made for the supplying of non-settler funds.

1. Types of funds

Non-settler funds which have been made available for land-settlement operations have consisted of public, semi-public, or private capital. In those cases in which the funds represented semi-public capital, they originated by the fact that a fund was created in the hands of agencies representing a combination of public and private enterprise.

Another distinction which may be made is between funds representing funds of land settlement agencies, and auxiliary funds for either settlement agencies or settlers to supplement their own funds.

It may also be noted that the non-settler capital has consisted partly of funds which were and partly of funds which were not to be repaid. In the former case the capital was supplied in the form of credit or loans. In the second case, it was advanced in the form of subsidies.

Furthermore, there have been funds for ordinary purposes as well as funds for extraordinary purposes. The extraordinary funds were made available for specific types of settlement such as the placement on the land of ex-service men, refugees, or unemployed persons.

Still another distinction which needs to be made divides the land settlement funds into general and specific funds. The most important specific funds have been land purchase funds, land improvement funds, funds for equipment or initial establishment, funds for the establishment of public-service facilities, funds for the purchase of new settlements on the part of the settlers, and funds to mobilize the settlers' own capital. For most of these funds the names explain their purpose. With respect to some of them, however, a few explanatory notes may be added. Land improvement funds, as understood in this article, are funds supplied for the purpose of financing either reclamation work or the construction of new buildings and the remodeling or enlargement of existing ones, or both types of activities. Funds for equipment or initial establishment are those which are designed to assist the settlers in the purchase

of machinery, seeds, fertilizer, etc. Funds for the creation of public-service facilities are those which serve to establish schools, to build roads, to develop communication facilities, and to perform similar work.

In the field of capital advanced in the form of land settlement credit, apart from distinguishing between credits according to their purpose, it is necessary to make a distinction between intermediate and long-term credits. This distinction is of particular importance with respect to credit funds established in Germany. The German loan funds have often been referred to as intermediate credit and long-term credit funds. As a matter of fact, the German land settlement banking structure has grown up along the lines of this distinction. Where the division has taken place, and to what extent this development has been different from the methods adopted in the other four countries will be brought out at a later point of this discussion.

2. Legislative background

In many cases funds for full-time farming settlement have been made available through legislative measures appropriating funds for both full-time and part-time farming settlement since these two types of settlement have often been handled together. In those cases in which mixed funds were set up, their significance for full-time farming settlement depended upon the amount of emphasis placed on each type of settlement at the time of legislation and during the period of disposal. In this connection it should be noted that, in the Scandinavian countries, due to the above-mentioned addition of full-time farming settlement to former programs of settling agricultural workers on part-time farms, and the increasing emphasis on full-time farming settlement, the mixed funds appropriated in Denmark since 1909, and in Sweden since the World War, have been designed primarily for the financing of the latter type of settlement. Probably the same thing may be said of the Norwegian appropriations of the last few years, since strong efforts have been made there also to bring about more full-time farming settlement.

3. Agencies, size, and purpose of important ordinary funds established

The most important public funds will be pointed out first.

England

One of the most important funds for the creation of new full-time holdings in England has been the Local Loans Fund handled

6/ It is to be noticed that in English legislation, equipment funds mean funds for the erection, alteration and adaptation of buildings, and that this terminology differs from that used in this article. See for instance Section 14 of Small Holdings and Allotments Act of 1926.

by the Public Works Loan Commissioners. This fund, which serves many purposes,^{7/} was linked with the establishment of such holdings by the Small Holdings Act of 1892, which provided that "the Public Works Loan Commissioners may, in manner provided by the Public Works Loan Act, 1875, lend any money, which may be borrowed by a county council for the purposes of this Act."^{8/} It was maintained as a source of financing land settlement by later laws.

The amount of money which the Commissioners have had annually at their disposal for various purposes ranged, during the decade of 1920-1930, from 6,500,000 to 50,500,000 pounds. The portion which they were to make available for small holdings was not fixed. Apparently, it was left to their discretion to decide the extent of such loans. As to the activities of the commissioners in connection with the Small Holdings and Allotments Act of 1926, an agreement between them and the Treasury on March 19, 1927, provided that a sum up to a maximum of six million pounds should be made available for loans to County Councils in the first four years of the operation of the Act.^{9/}

The Small Holdings and Allotments Act of 1907 created another important fund, the Small Holdings Account at the Bank of England. Into this fund there was paid at the beginning, in 1908, a sum of 100,000 pounds. Thereafter, the annual appropriations have been as follows:

(see next page for table)

^{7/} See Article I of this series, p. 2.

^{8/} Section 19 (2).

^{9/} Fifty-third Annual Report of the Public Works Loan Board, 1926-27, p. 8.

Table 3. Annual appropriations to small holdings account
in England 1909-10 to 1935-36^{10/}
(in English pounds)

(For rates of exchange, see Table 18, end of article)

Year	:	Amount	::	Year	:	Amount
1909-10		11,000	::	1923-24		850,010
1910-11		5,000	::	1924-25		899,300
1911-12		3,000	::	1925-26		875,055
1912-13		50,000	::	1926-27		875,055
1913-14		30,000	::	1927-28		655,055
1914-15		65,000	::	1928-29		920,055
1915-16		40,000	::	1929-30		1,722,150
1916-17		9,000	::	1930-31		854,050
1917-18		170,000	::	1931-32		862,000
1918-19		70,000	::	1932-33		860,000
1919-20		177,000	::	1933-34		853,000
1920-21		1,177,000	::	1934-35		850,000
1921-22		683,000	::	1935-36		848,000
1922-23		682,000	::			
			::			

One of the major purposes which this fund was to serve under the Acts of 1907 and 1908 was to cover the expenses of the Board in case the Small Holdings Commissioners, operating under the supervision of the Board, should act in default of a county council, or in case the Board should conduct an experiment in order to demonstrate the feasibility of the establishment of small holdings. Another important purpose of this fund was to enable the Board to pay, with the consent of the Treasury, the whole or part of any loss which might result from the working of a land settlement project initiated by a local authority and approved by the Board.

In addition to using the Small Holdings Account, the Small Holdings Colonies Acts of 1916 and 1918 made available money out of the Development Fund.^{11/}

With a view to pushing land settlement ahead immediately after the World War, and primarily for the purpose of fostering the settlement of ex-service men, a special fund was turned over to the Public Works Loan Commissioners under the Land Settlement (Facilities) Act of 1919. Simultaneously, it was provided that the money lent for land settlement by the Commissioners to local authorities in the next two years should come from this fund, and that thereafter the Commissioners should make advances again from the Local Loans Fund.

^{10/} From Estimates for Civil Services of respective years.

^{11/} For explanation of nature of this Fund, see Article I, p. 7.

The special fund, which was called Land Settlement Account or Fund, originally amounted to 20 million pounds, but was subsequently fixed at 17 million pounds for England and Wales.

The Agricultural Land (Utilization) Act of 1931, under which the functions of the Ministry of Agriculture and Fisheries were considerably broadened, authorized the Treasury to pay into the Small Holdings Account up to 5 million pounds. With this money the Minister was to be enabled to acquire land for use as demonstration farms; to recondition land suitable for agricultural purposes; and to provide small holdings for unemployed persons, ex-service men and agricultural workers. However, immediately after the passage of the Act the Government decided that on account of a paramount necessity for economy in national expenditure it would not be possible to ask Parliament to vote any money for the purposes contemplated therein.^{12/}

In 1934 another fund became partially available for the financing of land settlement. This is the "Special Areas Fund" established in connection with the passage of the Special Areas (Development and Improvement) Act of that year. It is under the control of the Treasury and is to serve as a means of enabling the Special Areas Commissioners^{13/} to bring relief to unemployed

^{12/} Report of the work of the Land Division, 1931, p. 5. The circumstance which led to this decision were as follows: In the early part of 1931 the Labor Government under Ramsey Macdonald was in office. The campaign promises of the Labor Party had included more social legislation. There was a great deal of unemployment, so that the unemployment insurance fund was exhausted, and the Government had to supply additional resources. Owing to this, at least in part, a deficit threatened in the national budget. Financial difficulties in certain continental countries, together with the transfer of capital away from England, resulted in a serious situation for the Bank of England. The Labor leaders wished to balance the budget by levying additional taxes on the rich; other political elements proposed to balance it by reducing expenditure for unemployment and other social purposes. On July 31, the very day the Land Utilization (Facilities) Act, 1931, was passed, the May Commission reported that the budget deficit was likely to be much greater even than had been expected, setting their estimate of the deficit at \$600,000,000. To get this figure they included unusual welfare expenditures. The Commission proposed to cut down expenditures. The Trades Union Council insisted that the deficit be made up through increased taxation. The Labor Ministry resigned August 24. Macdonald consented to head a coalition Government, thus leaving the Labor

and distressed persons in specially depressed districts.

The Act specifically authorizes the use of part of the money appropriated for the granting of financial assistance toward the establishment of small holdings or allotments. This aid is to be rendered in such a way, however, "that no such assistance shall be provided without the consent of the appropriate Minister given after consultation with any Government Department concerned." The fund was to contain 2 million pounds at the beginning, and thereafter such sums as Parliament might determine.

The funds mentioned above were all national funds. As to settlement funds created locally, the English land settlement acts have authorized the local authorities to use funds out of their income from local taxation. Just how much tax money of this type has been set aside by the local authorities is not known.

Germany

In the case of Germany, not only national funds are to be considered, but also those funds which were furnished by state governments. Among state funds those of the State of Prussia deserve particular attention due to the significant role of that state in the history of German land settlement.

Under the Prussian Land Settlement Act for Posen and Westprussia of 1886, the Land Settlement Commission was appropriated 100 million marks, which were to be used to purchase land suitable for settlement, and to defray expenses arising in connection with the preparation of the holdings and the establishment of facilities for public services. This fund was increased in 1898, 1902, 1908, and 1913, with the result that, by 1913, it amounted to more than 800 million marks.

Desirous of fostering land settlement not only in the two provinces covered by the Land Settlement Commission, but over its entire territory, the Prussian Government took another important financial measure soon after 1890. By the so-called Rent Holdings Acts of 1890 and 1891, it made available the resources of the provincial rent banks.^{14/}

Party. This Coalition Government was in power in September when, according to the Report of the Land Division, the Government decided that the 5,000,000 pounds made available for land settlement should not be applied to that purpose. There was an election, and the Coalition Government just formed was returned by an unusually large majority. The financial situation was so bad that fall that England went off the gold standard.

^{13/}One Commissioner was appointed for England and Wales, and another for Scotland.

^{14/}See also Article I, of this Series, p. 6.

Apart from using their own funds, these rent banks raised capital through the sale of rent bank bonds; up to September 30, 1919, they had sold bonds amounting to about 225 million marks.^{15/} Their main functions were to furnish long-term credit to settlers in order to enable them to purchase their holdings in instalments over a long period of time; to take over the financial claims of the settlement agencies against the settlers; and thereby to make the capital of these agencies available for new settlement projects.

Prior to the end of the World War, the Prussian Government made several appropriations for the purpose of creating intermediate credit funds. All together these appropriations amounted to 115 million marks.^{16/} The Prussian State Bank (usually called See-handlung) became the main administrative agency. It received the 100 million marks appropriated in 1916. The funds were to be used primarily for the purpose of removing encumbrances existing on land suitable for settlement, and for financing the erection of buildings.

During the inflation period from 1919 to 1923 two things happened in connection with the creation of land settlement funds: the pre-war funds were depreciated and wiped out; new appropriations were made to keep land settlement going. Some of these new appropriations ran into billions and trillions of marks, which, converted into gold marks or dollars, amounted to but small amounts.^{17/}

Since the funds made available by the Prussian government before the World War had been destroyed by the forces of inflation, new funds had to be created after the currency had been stabilized. In connection with this restoration of funds, the participation of the Federal Government in land-settlement financing in 1926 and thereafter played a very important role.

Funds had to be restored both in the field of intermediate and long-term credit. As to the first type of credit, the following table shows the main appropriations made by the Federal and Prussian Governments from the time of stabilization until the end of 1929:

^{15/} Unterausschuss fuer Landwirtschaft, *op. cit.*, p. 28.

^{16/} Acts of June 12, 1900, July 20, 1910, and May 8, 1916. The last Act made available 100 million marks.

^{17/} In viewing the importance of these appropriations, it should not be forgotten however, that the internal purchasing power of paper marks was higher than the external purchasing power.

Table 4. Public land settlement credit, exclusive long-term credit through land rent banks, made available by the Federal and Prussian governments in Germany 1924-1929^{18/} (in million marks)
(For rates of exchange, see Table 18, end of article)

Type of credit funds	Year of Appropriation						
	:1924	:1925	:1926	:1927	:1928	:1929	:1924-29
Federal Intermediate Credit	: -	-	50	50	50	45.5	195.5
Prussian " "	: 10	13.5	20	20	20	20	103.5
Intermediate Credit of Rent	:						
Bank Credit	:						
Institution	: -	-	-	-	-	10	10
Funds from Prussian House	:						
Rent Tax	: 5	10.5	10	22	20	10*	77.5
Prussian Credits for Public	:						
Service facilities	: 1.25	1.5	1.25	1.5	3	3.5	12
	:						
All Credit Funds	: 16.25	25.5	81.25	93.5	93	89	398.5
	:						

*Preliminary.

The Federal funds appearing in the first line of the appropriation figures of the table were supplied at a time when, on account of difficult post-war conditions, the various German states found it extremely difficult to put up new financial means for land settlement. They were made available under a Federal Act of July 1, 1926, which provided that in each of the following five years 50 million marks should be set aside as intermediate loan funds. It was further stipulated that these 250 million marks should be used "until the market for rent bank bonds had recovered or other possibilities of long-term credit had been opened up." The Rent Bank Credit Institution (Rentenbankkreditanstalt) was to administer the funds, which, in accordance with the administrative rules and regulations concerning this Act, were to serve as a means of financing land purchases, the improvement of settlement lands and the equipment of new holdings.

The funds from the Prussian House Rent Tax were to be loaned for the construction of buildings on new holdings.

In addition to the funds mentioned in the table, certain other appropriations were made, with the result that the total capital supplied for intermediate credit within the six years mentioned amounted to at least 470 million marks.^{19/}

^{18/}Das laendliche Siedlungswesen nach dem Kriege, Unterausschuss fuer Landwirtschaft, Band 10, Berlin, 1930, p. 140.

^{19/}Ibid., p. 140.

It is further to be mentioned that a new bank for the handling of intermediate credit funds was established jointly by the Federal and Prussian Governments in September 1930. This bank was founded with a basic capital and reserve fund of 100 million marks.

With respect to the restoration of long-time credit funds, an important measure was taken in Prussia in 1927 when, under the Act of December 29 of that year, the Prussian Land Rent Bank (Preussische Landesrentenbank) was created. This bank took the place of the former provincial land rent banks, and absorbed those provincial banks which had survived the inflation period. It was not given any basic capital at the beginning; however, under an amendment dated July 31, 1921, it was supplied with a capital and reserve fund of 20 million marks. This same amendment provided further that the bank should be entitled not only to issue land rent bonds, but also to borrow money and to participate in operations designed to develop funds for land settlement credit.

In the post-war period the governments of a large group of German provinces and other political subdivisions provided special funds in order to enable persons who want to settle on new holdings in other regions to mobilize their own capital. These funds are used either for mortgaging the holdings of the settler's parents in case his parents own a farm, or for assisting him in the sale of his landed property in case he happens to own a holding, and wants to move to another place. Funds designed for the first mentioned purpose actually represent loan funds which are to serve as a means of liquidating in advance the settler's share in the heritage of his parent's farm.

The settlement funds which the state of Denmark has made available since the beginning of this century will be considered next. These funds have consisted of certain general funds appropriated annually by the legislature in accordance with the financial provisions of the various land-settlement acts, and a Land Purchase Fund created under a law of 1919. The annual appropriations for general land settlement funds have been as follows:

(See next page for table)

Table 5. Annual appropriations for land settlement in accordance with Danish legislation enacted in the period from 1899-1934.^{20/}
(For rates of exchange, see Table 18, end of paper)

Period	Annual amounts to be appropriated (in Danish crowns)
1899-1903	2,000,000
1904-1908	3,000,000
1909-1913	4,000,000
1914-1916	5,000,000
1917-1920	*
1921-1927	12,000,000
1928-1931	8,000,000
1932-1934	*
1935-1937	10,000,000
*No data	

As pointed out previously, the funds before 1909 were funds for part-time farming settlement. Those after 1909 were mainly funds for full-time farming settlement, to be used primarily for the purpose of assisting settlers in the purchase of land and the establishment of buildings.

Apart from these appropriations there should also be mentioned another fund of 10 million crowns created by an Act of June 1, 1929. This fund was to be used for the purpose of intensifying the land settlement activities in Northern Sleswig, an area ceded by Germany after the World War. All these funds have been controlled by the Ministry of Finance.

The Land Purchase Fund contained 98 million crowns in 1928. It is to be used by the State for the purchase of land in connection with the establishment of new settlement holdings on state-owned land under the Danish Rent Holdings Act of 1919.

Norway

In Norway two special settlement banks were created prior to the end of the World War. The first one was the Norsk Arbeiderbrukog Boligbank (Bank for Workers' Agricultural Holdings and Dwellings), established in 1903 with a basic capital from the State of five million crowns, and authority to raise this amount six times by means of loans from other sources. The second one was the

^{20/}Data compiled from Danish land settlement acts and J. Frost, Die daenische Haeusler-Siedlung von 1900-1930, op. cit.

Norske Stats Smabruk-og Boligbank, which, on the basis of a settlement act of 1915, replaced the first bank. It was authorized to increase its basic capital, which is fixed by Parliament, up to ten times, and was entitled to make loans (1) for the formation, purchase, and cultivation of agricultural holdings and the repayment of mortgages on settlement land; and (2) for the construction, equipment and purchase of dwellings, or for the repayment of mortgages on the dwellings themselves.

Both banks were created during a time when the State was concerned only with the fostering of part-time farming settlement. The first bank, therefore, never entered the field of full-time farming settlement, but the second, under the influence of post-war efforts to lay more stress on full-time farming settlement, has more recently been concerned also with the financing of projects of the latter type of settlement.

Under the Act of June 24, 1931 the Norwegian State Bank was likewise authorized to extend loans for the creation of new agricultural holdings. Apart from the land settlement banks mentioned, the Norwegian Government has endeavored to foster land settlement through the creation of a special Land Improvement Fund. This fund, which was established in 1892, has been administered by the Department of Agriculture.

Sweden

So far as Sweden is concerned, the arrangement for the creation of funds has been somewhat similar to that in Denmark. No special settlement bank was created. The annual amounts which were made available by the legislature in the period from 1904-1922 have been as follows:

Table 6. Annual appropriations for land settlement made
by the Swedish legislature 1904-22.^{21/}
(For rates of exchange, see Table 18)

Period	: Annual Appropriations in : Swedish crowns
1904-1908	2,000,000*
1909-1912	5,000,000
1913-1915	7,500,000
1916-1917	6,000,000
1918-1919	7,500,000
1920-1921	12,000,000
1922	13,000,000

*This is an average figure; actually 10 million crowns were provided by the Act of June 17, 1904 to be spent in the next 5 years.

^{21/} Data compiled from Land-Settlement Acts and W.I. Petterson, The Formation of Small Holdings in Sweden, International Review of Agricultural Economics, N.S.2:(1924) p. 224.

Apart from making these appropriations, the Swedish Government, like that of Denmark, created a Special Land Purchase Fund. This fund contained about 10 million crowns in 1930.

Since 1920 a section in the Department of Agriculture, called Bureau of the Department of Agriculture for the Subdivision of Land, has exercised a general supervision over all loan matters. More recently the Own Home Board, which grew out of this Bureau, has performed this function.

In the field of semi-public funds, it is interesting to take a look at the creation of the capital of the German semi-public land settlement companies. In connection with its contributions to this capital, the Prussian government made available 10 million marks by an act of May 28, 1913.

It has been estimated that before the World War the semi-public companies in the Prussian part of Germany had a basic capital of 50 million marks,^{22/} about 50 percent of which had come from public sources.

During the inflation period these funds also were destroyed to a very large extent. Most of the agencies lost more than 75 percent of their capital, as is shown in the following table:

Table 7. Loss of capital by Prussian land settlement agencies during the inflation period 1919-23 - in thousand marks^{23/}
(For rates of exchange, See Table 18)

Agency	: Capital as : Capital after : Loss in		
	: per January:gold mark	: per cent of	
	: 1, 1919	: statement as	: pre-war
	:	:per January 1,:	: capital
	:	:1924	:
Ostpreussische L.-G.	7,651	1,530	80
Eigene Scholle	8,554	3,027	65
Pommersche L.-G.	6,250	1,615	74
Schlesische L.-G.	5,500	2,879	48
Hoefebank	1,000	229	77
5 oestliche Siedlungsgesell-			
schaften	28,955	9,280	68
Sachsenland	7,471	1,700	77
Rote Erde	2,100	492	77
Nassauische S.-G.	809	093	88
Rheinisches Heim	4,000	575	86

^{22/}Unterausschuss fuer Landwirtschaft, op. cit. p. 28.

^{23/}Ibid., p. 23.

It was, therefore, necessary to rebuild these funds after stabilization, if the semi-public agencies were to retain the same importance which they had enjoyed before the World War. This rebuilding was actually undertaken, and had reached the following status in November 1928:

Table 8. Total basic capital and portion of capital representing investment of the State of Prussia in land settlement agencies operating in the eastern part of Germany, 1928-29^{24/}

(For rates of exchange, see Table 18, end)

Agencies	Total bank capital as of November 10, 1928	Portion contributed by State of Prussia as of November 10, 1928	Amt. in marks	Percent
Oberschlesische Landgesellschaft	1,998,000	1,001,000		50.1
Schlesische Landgesellschaft	3,879,000	1,921,000		49.5
Landgesellschaft Eigene Scholle	4,937,900	2,458,200		49.7
Landgesellschaft Grenzmark-siedlung	1,000,000	500,000		50.0
Ostpreussische Landgesellschaft	2,347,200	1,170,000		49.8
Pommersche Landgesellschaft	2,967,700	1,230,700		41.5
Schleswig-Holsteinische Hoefebank	988,500	506,900		51.3
All Agencies.....	18,118,300	8,787,800		48.5

Mention may also be made of the creation of the Rye Rent Bank on the part of the German semi-public land settlement agencies and certain other agencies in the post-war period. This measure was effected in the midst of the inflation period, in August 1922, when the rent banks had reached a point where they were unable to sell their bonds in the market, and also when other financial resources for land settlement had become exhausted because of the heavy depreciation of the currency. The idea was to establish a bank which, instead of issuing rent bonds based on mark values, would raise capital through the sale of rent bonds in values of stimulated quintals of rye. These quantities of rye were to represent a new stable

^{24/} Based on data in Das Laendliche Siedlungswesen nach dem Kriege, Unterausschuss fuer Landwirtschaft, Band 10, Berlin 1930, p. 144.

value which would not be subject to the violent fluctuations occurring in the sphere of the rapidly depreciating German mark.

The bank became the first banking institution with a stabilized basis of values, and operated in the field of land settlement for several years. Two laws, one of June 23, 1923, and the other of July 14, 1923, helped to clear the way for its operations by removing all legal obstacles which existed.

4. Role of extraordinary funds

In some of the countries under review, extraordinary funds have been established for the purpose of dealing with land settlement of ex-service men, refugees, and unemployed persons. Thus, in both England and Germany funds were made available for the settlement of ex-service men through legislation passed in 1916.

To a large extent also the funds made available under the English Land Settlement (Facilities) Act of 1919 belong to this group. This is due to the fact that, although the Act was to be applicable not only to ex-service men, but also to other kinds of settlers, and was supposed only to give preference to ex-service men, the Government decided in 1920 that the preference granted by that Act must, as far as practicable, be "absolute".^{25/}

In Germany, following the World War, the Federal Government made available special funds for the settlement of refugees, particularly those refugees who came out of territory which was ceded to Poland. A fund of 100,000,000 paper marks, corresponding to the value of 115,500 gold marks, was made available in January 1923. In order to keep this fund from rapidly depreciating in value under the influence of the inflation, it was necessary to make new appropriations on several occasions. After the German currency had been stabilized, a new fund was created amounting to 2,528,000 gold marks on January 21, 1925. At the same time the compensation to be paid to the settlers for property which they had lost was fixed at 2,536,200 gold marks. Later on special measures were taken to provide funds for the purpose of granting long-term credit to the refugee settlers.

^{25/} Report on the present position and future prospects of ex-service men settled on the land in England and Wales, 1923, p. 4. The decision was made when it was found that the number of applicants from the ranks of ex-service men was very large, and the cost of providing holdings very high.

5. Provisions regarding subsidies

The question of subsidies has been somewhat controversial. There are some who have argued that no subvention should occur in the field of land settlement, and that all non-settler funds should be supplied in the form of credit. There are others who have contended that the furnishing of non-settler funds should be carried out both in the form of credits and in that of subsidies.

The arguments for the limitation of non-settler capital to credit funds only has been based on the idea that land settlement is nothing but an economic enterprise which is to be carried out strictly along business lines. The arguments for supplying credit as well as subsidies has been based mainly on the following three considerations:

1. Other than economic objectives are involved in land settlement operations, and the accomplishment of the other aims may be considered worth the payment of subsidies.
2. The State is in another position than a private business concern. It is not necessary for the government to cover at once all the costs which are involved in the creation of new holdings. The recovery of public outlays can take place over a long period of time through various forms of payment. What is not recovered in the form of interest and amortization payments, may be collected in the form of direct and indirect tax payments. If land settlement is carried out carefully, it may be done without throwing an undue burden on the rest of the population.
3. The procedure is required on account of the existence of extraordinary circumstances.

Many of the land-settlement acts which were passed in the countries considered in this article have opened up sources out of which subsidies could be paid. Sometimes special subsidiary funds have been set up. The more regular procedure, however, has been to build funds out of which either loans or subventions could be granted.

The main purposes for which subsidies have been allowed have been to cover administrative expenses, to assist in the purchase of land; to contribute to the cost of land improvements; to help meet the expenditure for interim management; to reduce interest rates; to defer or interrupt payments; and to help meet capital losses caused by failures.

6. Role of guarantee funds

In some cases the land settlement acts of the countries under review have authorized the guaranteeing of loan transactions. Thus, for instance, the English Land Settlement (Facilities) Act of 1919 provided that a county council may guarantee loans for the purchase of equipment.^{26/} The Small Holdings and Allotments Act passed in England in 1926, contains a provision according to which a county council may undertake to guarantee the repayment to a land settlement society, which is incorporated under the Building Societies Acts of 1874 to 1894, or the Industrial and Provident Societies Acts of 1893 to 1913, of building loans granted by the society to members who are owners of small holdings provided by the council as well as to guarantee the interest on such advance.^{27/}

One important case of a Federal guarantee in Germany occurred in 1927 when, under an act of July 16, 1927, the Federal Government was authorized to guarantee up to 70 million marks loans advanced to refugee settlers in the form of long-term credit or funds borrowed by certain credit institutions for the purpose of fostering such loans.

7. Source of funds

The public funds mentioned have come from two major sources, namely taxation and the issuing of bonds. So far as taxation funds are concerned, it is interesting to note that the Danish Land Purchase Fund was developed out of a levy on entailed farms under the Act of October 4, 1919, and that in Germany certain funds for financing the erection of buildings on new holdings came out of a tax placed on housing property, the so-called House Rent Tax.

The Danish Act of October 4, 1919, which contained the tax on entailed estates, was passed in connection with efforts to carry forward the dissolution of such holdings, and to gain thereby more land for small farms. Its main characteristics and the operation of the tax under it have been described as follows:

"This Act gives to the possessors of fiefs, family estates or entails with personal property or capital attached to them, the right to convert them into freehold property on condition that they pay to the Exchequer 25 percent of the value of property which is subject to

^{26/} Section 18 (1).

^{27/} Section 14 (1) (3).

a reversion to the State and 20 percent of the value of other property, and place at least one-third of the land at the disposal of the State in return for a compensation to be fixed. This land, or its value, will then be used for the formation of small holdings in conformity with the provisions laid down in the Act for the sale of public land, while the sums paid to the State are deposited as a special Land Fund, which shall be utilized for the acquisition of land or for making loans to small farmers. In calculating the sums payable to the State, the valuation for property tax forms the basis for real estate, and in calculating the compensation, the basis is the valuation for land tax, so that the land given up is estimated at a value answering to the price that a sensible purchaser could be supposed to pay for the land if it belonged to a middle-sized farm. In this calculation, no regard is paid to the injury caused to the remainder of the property by detachment of the part given up, nor to the value of the buildings standing upon that part beyond the value they would have when the land was used for the formation of small holdings. The land taken is, however, selected on the proposal of the owner, so that the remainder of the property shall be injured as little as possible. The owners are also entitled to point out land falling outside the property subject to entail.

"The amount of the compensation is paid out of the Land Fund.

"The land to be given up must be pointed out immediately upon the property being converted into freehold, but will only have to be given up later when demanded by the Minister of Agriculture. It was provided that when an owner did not, before the end of 1921, avail himself of the opportunity afforded by the law of converting his estate into freehold property, an annual tax to the Exchequer of 1.2 percent of the value of the property should be paid, if the property were subject to reversion, and otherwise 1 percent of the value. No owner has, however, omitted to request the conversion of his property into freehold. Up to April 1925, more than 14,000 hectares became available under the provisions of this Act for division into small holdings and the Land Fund amounted in the aggregate to about 73,000,000 crowns. The commutation of the feudal estates is, however, not yet completed. The Land Fund is expected to reach about 90,000,000 crowns, but besides that, it is increased by putting aside

the annual interest of the capital."^{28/}

In Germany, before the World War, a good portion of the capital needed for land settlement was raised by land-rent bonds, and, due to the financial difficulties of the post-war period, a smaller proportion later on. Also in England land settlement funds were created through bond issues, not, however, through special land settlement bonds, but through general state bonds sold in connection with the operation of the Consolidated Fund of the United Kingdom.

8. Cost of funds

Land-rent bonds issued by the Prussian provincial land rent banks carried interest of $3\frac{1}{2}$ percent in the early period of the operation of the Prussian Acts concerning land rent bank credit of 1890 and 1891. The banks were authorized to issue bonds at 4 percent, but this rate was not applied until later. After the stabilization of the currency in 1924, the rate was placed much higher, due to the lack and higher cost of capital in Germany after the World War. Under the administrative rules and regulations of March 21, 1928, issued with respect to the Prussian Land Rent Bank Act of 1927, the Land Rent Bank was entitled to issue land rent bonds with an interest rate ranging between $5\frac{1}{2}$ and 8 percent.

Development of Settlers' own capital

As mentioned at the beginning, the furnishing of capital on the part of the settler is of particular importance in case it is intended to make him an owner-operator. But also in case he is to be settled as a tenant, there is a need for settler's funds. The more capital a settler will be able to muster at the time of settlement; the less will be his financial burdens. The stimulation of capital creation in the ranks of the settler is, therefore, one of the most important problems in the field of land settlement financing.

There are two important ways of fostering the creation of settler capital. One is the building of capital through the stimulation of saving prior to the time when the settlers become applicants for new holdings. The other is the raising of funds through their participation in the labor performed in connection with the preparation of the holdings. Furthermore, there are two types of settler funds, (1) individual funds, and (2) cooperative funds.

^{28/} "Conservation and Formation of Small Holdings in Denmark", International Review of Agricultural Economics, Vol. 4, No. 1, January-March 1926, p. 61-62.

1. Stimulation of saving

Among the various countries concerned, apparently only in Germany have special efforts been made so far to stimulate the accumulation of capital through saving prior to settlement. There the Information Office for Settlers, connected with the Society for the Promotion of Internal Colonization, has been active in this respect in collaboration with the German Settlement Bank, the German Giro Union (Deutscher Giroverband)^{29/} and other agencies interested in the fostering of saving.^{30/}

2. Funds through participation in settlement work

In all countries included, numerous cases have occurred in which settlers have been unable to participate in the settlement work, and to contribute to the financing of their holdings by funds which they earned in the course of such work. Beyond that, in Germany, a special financial arrangement was designed by the Federal Government to facilitate the settlement of members of the Voluntary Labor Service.^{31/} Under this arrangement, which was put into effect by a decree of July 23, 1931, persons who worked in the service for 12 weeks on projects of national economic importance could be credited with 1.50 marks for each working day. On the amount credited, being at a maximum 180 marks, 6 percent interest was to be paid. It was further provided that the Voluntary Labor Service worker should be allowed to use this fund within a period of ten years, but only for the purpose of making a down payment on the purchase of an agricultural holding or a dwelling.

3. Cooperative funds

Cooperative funds have been created in connection with the establishment and operation of cooperative land settlement associations. They represent the association's own capital, and have usually been raised by making the members of the organization take over one or more capital shares. In some instances they have been built up partly out of capital subscriptions, and partly by means of charging an entrance fee.

Regarding the raising of such funds by a number of land settlement associations operating in the first decade of this century in the eastern part of Germany, Lent reports as follows:

^{29/} A banking association.

^{30/} Karl Massmann, Zur Finanzierung der landwirtschaftlichen Siedlung, Konferenz von Oeynhausen, February 11-14-, 1933. Manuscript, p. 14.

^{31/} An organization similar to the American Civilian Conservation Corps.

"Since persons of the middle class were to be solicited primarily, the amount of the capital stock ranged between 30 and 300 marks. Shares of 100 to 200 marks were chosen most often ... Usually the members were required to become liable up to twice the amount of the share capital. In some cases the liability was higher. In a few cases it was from six to ten times the amount of the capital subscribed. In order to enable members and agencies disposing of substantial means of capital to participate on a larger scale in the financing of the land settlement association, some of these cooperatives have made it possible to acquire up to 100 shares."^{32/}

Discussing the business policies of English cooperative land settlement associations in a leaflet published in 1918, the Agricultural Organization Society made the following observation with respect to capital stock:

"Every member must hold at least one share. It is usual to make the shares of a rather high nominal value (say 1 pound), only a small amount on each being paid up (say 1s or 6d). The object of this arrangement is to make it possible for the Society to conform with certain regulations of the Board of Agriculture. These regulations were drawn up when the Act came into force, and refer to societies which rent from public authorities. They provide that every tenant must hold a large number of shares in proportion to his rent, as it is thought that the unpaid amount forms a guarantee for the rent. Societies renting direct from private land-lords can generally act as they please in this matter."^{33/}

No statistics are available on the amount of funds which have been raised among members of cooperative land settlement associations. There may have been cases in which individual associations raised substantial sums, with the result that no outside capital was needed. As to the majority of cases, however, it may be assumed that outside capital was required, since very often the members of cooperative land settlement associations have consisted of persons with small means.

^{32/} Walter Lent, Die laendlichen Siedlungsgenossenschaften ihre Entwicklung und ihre Probleme, Oranienburg-Eden, 1930, p. 19.

³³ Cooperative Land Renting Societies, Agricultural Organization Society leaflet B.2, Reissued January 1918.

Disposal of Funds in the Form of Credit

1. Regional provisions

In Germany under the Federal Regulations of November 10, 1931 concerning intermediate credit funds, the territory was divided into three zones, according to the urgency and importance of land settlement. With respect to Zone 3, it was ruled that Federal credit should be extended only in exceptional cases. Furthermore, various other gradations in the extension of credits referring to the purpose for which funds might be used and the rates of interest to be paid, were established for the different zones.

2. Settlement agencies eligible for loans

In those cases in which the loans were not made direct to the settlers, it is of interest to see which agencies were made eligible for public funds designed to assist land settlement. In England the Small Holdings Act of 1892 authorized the Public Works Loan Commissioners to extend loans to county and borough councils. This Act, furthermore, empowered the councils to make loans to co-operative associations having as one of their objects the profitable working of small holdings. These agencies, if they wanted to receive funds from the Board, were required to meet certain requirements relating to amount of stock, limitation of dividends, bookkeeping, government supervision, and other matters. Similar provisions were included in the Acts of 1907, 1908, and 1926. Since 1907, loans to cooperative associations could also be made out of the Small Holdings Account. The Special Areas (Development and Improvement) Act of 1934 authorizes the extension of loans to local authorities for the purpose of contributing toward the provision of small holdings.

In Germany the funds which have been made available by the public agencies have usually been accessible to semi-public agencies and also to private agencies provided that the latter were willing to collaborate with public land settlement authorities.^{34/}

In connection with the distribution of the Danish public funds, the Ministry of Finance has been authorized to make loans to associations formed exclusively for the purpose of land settlement work. By 1916 the following rules had been developed for such loans: The Ministry of Finance was required to approve the statutes of these associations in collaboration with the Ministry of Agriculture. Other prerequisites were that the associations had to agree to supervision on the part of the Ministry, and that their by-laws should not allow the payment of dividends of more than 5 percent. In addition, it was ruled that the associations must show

^{34/} For more detail on these agencies, see Article I of this series.

that they disposed of at least 35,000 crowns, or a capital of that value in the form of landed property. The act made it possible, however, to deviate from the rule with respect to the amount of capital at the disposal of the land associations in case special circumstances should make it advisable.^{35/}

In Sweden three types of agencies have been authorized to act as intermediaries in the granting of loans to settlers. These are (1) the Hushallningssällskap,^{36/} (2) stock companies, and (3) land settlement associations. The first type of agencies work with the communal government agencies. With respect to the other two types of agencies, which by 1928 consisted of about 30 each, it is interesting to note that requirements have been developed for them which are somewhat similar to those mentioned in the case of the Danish land settlement associations. One of the recent financial regulations, that of June 8, 1928, provided that funds should be advanced only if the companies and associations would meet the following conditions: (1) They must be companies or associations properly registered. (2) They must devote themselves exclusively to the acquisition of own homes through state funds. (3) They must provide sufficient security for promoting the acquisition of land on the part of persons with moderate means. (4) They must be non-profit organizations. (5) They must agree that a representative appointed by the Own Home Board on behalf of the State shall take part, without voting power, in their deliberations of policy. (6) They must allow the Own Home Board to examine their books. (7) Their constitution and by-laws must include provisions according to which the share-owners or members shall not for any year pay out more than a specified percentage of paid up capital or contributions in the form of dividends.

In Norway rural communes and land settlement associations have been eligible for loans.

3. Interest and amortization rates

Attention will first be given to rates of interest and amortization in connection with general loans. In England the Small Holdings Act of 1892 provided that the Public Works Loan Commissioners should be authorized to make loans to local councils at a rate not less than 3 1/8 percent. Later on it was ruled that the loans should be granted at the minimum rate allowed for the time being for loans allowed out of the Local Loans Fund. Apparently the interest rate never went beyond 3 1/2 percent in the pre-war period.

^{35/} See Act of April 11, 1916.

^{36/} "These are semi-official associations covering an entire province or more usually an arrondissement, some of which were founded more than 100 years ago...The principal object of the Hushallningssällskap is the development of agriculture generally." Wilhelm Irgens Petterson, the Formation of Small Holdings in Sweden, International Review of Agricultural Economics, Vol. 2, No. 2., April-June 1924, p. 222.

After the World War much higher rates had to be paid by the local authorities for money borrowed from the Public Works Loan Commissioners. There has, however, been a gradual drop from the level of the high rate established immediately after the World War to a rate which is very similar to that paid before the war. In the period from the end of 1918 to May 1923, the rates charged by the Public Works Loan Commissioners for loans raised by the councils out of the Land Settlement Fund established under the Act of 1919 were as follows:^{37/}

December 31, 1918 to July 31, 1921.....	$6\frac{1}{2}$	percent
August 1, 1921 to March 31, 1922.....	6	"
April 1, 1922 to October 1, 1922.....	$5\frac{1}{2}$	"
November 2, 1922 to April 31, 1923....	5	"
May 1, 1923.....	$4\frac{3}{4}$	"

By 1933 the rate had been reduced to $3\frac{5}{8}$ percent. More recently it was reduced to $3\frac{1}{2}$ percent.^{38/} These rates are for interest alone, not including any charge for amortization. In Great Britain the capital of loans received from the Public Works Loan Commissioners are repaid through annual installments.

The Danish Law of April 1916 provided that if loans are made to land settlement associations, a rate of 4 percent should be charged. The amortization rate for such loans was fixed at $\frac{3}{4}$ percent.

Under legislation passed in Sweden in 1908 a rate of 3.6 percent was asked for loans granted for the purpose of purchasing land. By 1920 the rate was fixed at 4 percent.

So far as German land purchase credit is concerned, the Federal Regulations of November 10, 1931, provided that at the end of a certain number of free years the rate of interest should be $4\frac{3}{4}$ percent, and the amortization $\frac{1}{4}$ percent.

With respect to land improvement credit, in Germany before the war, the rate of interest and amortization on loans made on the part of land rent banks for the purpose of establishing buildings on farms amounted to 4 percent. In accordance with the regulations established concerning the borrowing of funds out of the house rent tax for the construction of buildings on new holdings, the interest rate amounted to 1 percent up to March 1930. Thereafter, 3 percent interest and 1 percent amortization had to be paid. In Denmark, a rate of $4\frac{1}{2}$ percent interest was charged on loans for the erection of buildings in the post-war period under the Land Settlement Act of March 29, 1924.

^{37/} Land Settlement in England and Wales, 1919-1924, p. 41.

^{38/} Report of the Work of the Land Division, 1933, p. 10.

As to credit for the equipment of farms in England, it was provided by the Act of 1919 that settlers should not pay more than 5 percent on loans advanced by banks for livestock, fruit trees, seeds, implements, etc. With respect to the same type of credit, a German Federal Regulation of June 26, 1929 provided that after the end of a certain free period a rate of 2.5 percent should be paid. These regulations also stipulated that during the first 3 years, loans should be amortized at the rate of 2 percent, and in the following 2 years at the rate of 3 percent, etc., the amortization rate being thus increased by 1 percent at the end of each period of 3 years.

On November 10, 1931 the German rate for equipment credit was established at 2.5 percent. Payments at this rate had to be made after two free years had elapsed. Amortization was to begin at the rate of 2 percent after the 5th year of payment. The rate of amortization was to be increased annually by 1 percent plus interest saved.

In the case of farm purchase credit, the Prussian Land Rent Bank Law of December 29, 1927, provided that from the time when the Land Rent Bank takes over the rent payment obligations, settlers are required to make rent payments to the Land Rent Bank at a rate of 5 percent of the nominal value of the land rent certificates, and of the supplementary cash payments in case land rent certificates bearing $4\frac{1}{2}$ percent were given, and at the rate of $5\frac{1}{2}$ percent in case land rent certificates bearing 5 percent interest were rendered.

In Norway, rate of interest paid for farm purchase credit around 1930 amounted to 4 percent in case of settlement on land to be reclaimed, and $4\frac{1}{2}$ percent in case of settlement on other land.

Table 17 at the end of this report gives a summary of interest and amortization rates for the various countries included in this article to the extent to which it has been possible to ascertain the financing policies in this respect in the period from 1890 to 1935.

Various methods of staggering interest and amortization payments have very often been applied in the financing of land settlement in the Scandinavian countries. Thus, for instance, a Land Settlement Act of Denmark adopted on March 29, 1924, provided that payments on loans made for the purpose of land purchase, and the erection of buildings had to be effected in the following way:

"On the part of the loan granted for the purchase of land, $4\frac{1}{2}$ percent per annum; on the part of the loan granted for the erection of buildings, $4\frac{1}{2}$ percent

per annum on an amount of 8,000 crowns, if the costs have reached the stipulated maximum amount, or on an amount proportionately reduced if the cost of erection is lower than the maximum amount. The loan is repayable by amortization in the following manner: during the first five years no portion of the loan is repaid; after five years the part free of interest of the loan for the building is first of all amortized, then the part of the loan for the building on which interest is to be paid, the annual payment, until the loan for the building is repaid, being fixed at $4\frac{1}{2}$ percent of the original amount of the part of the loan on which interest is to be paid, with an addition of 1 percent of the original amount of the loan for the buildings; the loan for the building being amortized, the part of the loan granted for the purchase of land is amortized by payment of an annual sum, including interest and installment of principal, equal to $6\frac{1}{2}$ percent of the original amount of this part of the loan."^{39/}

Along somewhat similar lines a Swedish law of June 8, 1928 provided the following schedule of payment: Within the first six years, 4 percent interest on the total amount of the loan is to be paid, with no amortization. Beginning with the sixth year an annual installment of $6\frac{1}{2}$ percent is to be paid on two-fifths of the loan, called the amortization part. Thereafter, in addition to the payment on the amortization part, interest of $4\frac{1}{2}$ percent per annum is to be paid on the remaining three-fifths of the loan, called the standing part.

Attention is also drawn to an interesting example of the establishment of a flexible interest rate which is used in Denmark. This arrangement affects all owners of small land holdings. An Act passed on March 25, 1933, provides that the owners of small holdings shall be entitled to have their annual interest payments on loans granted for the purchase of land, and on loans for the construction of buildings converted into charges which would vary from year to year in accordance with the average annual market prices on agricultural production. Any payments made under this provision must, however, amount to not less than 50 percent of the amount of interest paid before this law went into effect, and to not more than 50 percent in excess of the previous rates. Apparently, a considerable number of small land holders have asked for adjustments under this Act with the result that in 1934 the interest payments have been much smaller than formerly.

^{39/} "The Conservation and Formation of Small Holdings in Denmark", International Review of Agricultural Economics, 4 (1926) p. 55f.

In most of the countries considered, the interest rate is to be about 1 percent higher than ordinarily in case the settler or the settlement agencies fail to make their payments in time.

4. Intervals between Payments

The land settlement laws of England consistently require that payments be semi-annual. Under the Prussian Settlement Commission settlers were likewise required to make semi-annual payments. Under more recent regulations with respect to land rent bank credit, as established by the Prussian Land Bank Act of 1927, quarterly payments were required. The Danish laws of 1909 and 1924 both called for annual payments, as did the Swedish law of 1908. As for Norway, by the law of 1903, loans for the purchase of farms must be paid in semi-annual installments, while the loans for the New Settlement Schemes of the Act of 1920 are to be returned through annual payments.

5. Loan limits

In Germany under the Federal Regulations of June 21, 1929, it was ruled that land purchase credit could be granted up to 90 percent of the estimated value of the land, not, however, up to 100 percent of the purchase price. The sum of the land purchase credit plus the amount of any encumbrances on the land is not allowed to exceed 90 percent of the estimated value of the land. That part of the purchase price which exceeds the limit of 90 percent has to be paid in cash by the land settlement agency. The English Act of 1908 allowed the settler credit for four-fifths of the value of the land. The post-war legislation of 1919, however, provided credit up to the whole value of the property. In Denmark it has been customary to limit the size of the loans for the purchase of land to nine-tenths the value of the land. In addition, the Act of July 1, 1927 provided that loans for this purpose should not exceed the sum of 7,500 crowns. In Sweden, the upper limit of such loans is five-sixths of the value of the land.

Under the German Federal Regulations of June 21, 1929, land improvement credit was not to exceed 90 percent of the value of the improvements to be made. Exception to this rule is to be made only if the improvement costs have been considerably reduced on account of uncompensated participation of the settler and his relatives in the improvement work. Also under the Federal Regulations of November 10, 1931, land improvement credit was allowed to be given up to 90 percent of the value of the improvements to be made.

The German Federal Regulations of June 21, 1929 provided that loans for building purposes should not exceed 14,000 marks in case of a full-time farming settlement. Under the regulation of the Prussian Ministries of Agriculture and Public Welfare of April 12, 1928, concerning funds out of the house rent tax, it was stipulated that as a rule the construction loan should not exceed 3,000 marks for each holding, and that in special cases it should not be more than 5,000 marks; in no case was the loan allowed to amount to more than two-thirds of the building costs. Also under the regulation of December 2, 1931, definite limits were set as to the amount of loans for building purposes. Under these regulations the highest amount which can be paid in the form of loans for construction of buildings is 8,300 marks. In Denmark an Act of 1917 set the same proportion, nine-tenths of the building costs, as the limit of loans. For the years 1920 through 1925 the limits to building loans were fixed at stated sums ranging from 11,500 to 16,000 crowns. Most of the small holders, it is reported, have taken the largest loans allowed.

In England the Small Holdings and Allotments Act of 1926 provided that any loans made for the construction and repair of buildings should not exceed 90 percent of the value of the property.

With respect to credit for equipment or initial establishment, under a Treasury regulation dated December 8, 1919, it was ruled in England that the county council should limit the sum to be advanced to any applicant to such amount which, in the opinion of the council, does not exceed the capital in cash or kind which the applicant is able to provide from other sources. In cases in which the councils are of the opinion that a larger amount might safely be advanced to the settler, and the previous sanction of the Board of Agriculture and Fisheries has been obtained by the council, it should, however, be possible to go beyond that amount.

In the case of Germany under the Federal Regulations of June 26, 1929, equipment credit was not to amount to more than 500 marks per hectare, and the value of the agriculturally used area for each settlement holding to which such credit was applied was not to exceed 4,000 marks.

Before the war, in Germany credit advanced by the land rent banks was allowed to amount to as much as 75 percent of the value of the holding. In case the holding was operated wholly by family labor without any permanent help of hired labor, the limit was as high as 90 percent. Similar provisions have been in vogue in the post-war period.

In Denmark since the Act of 1924, the maximum amount of all loans which may be granted has been fixed annually by the

Ministry of Agriculture in consultation with the Budget Committee of the Danish Parliament. In Sweden, acts passed in 1908 and during the post-war period provided that the sum advanced should not amount to more than five-sixths of the value of the holding. In Norway the loan limit has been fixed at nine-tenths of the value of the agricultural holding.

6. The furnishing of security

The asking of special security in connection with the extension of loans for land settlement has been a regular custom. There are only a few cases in which certain land settlement agencies were allowed to borrow money without furnishing security. Loans to the local councils of England were secured by charges on their funds or their rates.

Usually the loans to settlers have been secured by mortgages on the land or other properties of the holdings. The English Small Holdings Act of 1892 provided that the residue of the purchase money, if any, should be secured by a charge on the holding in favor of the council. Similar provisions were contained in the Acts of 1908 and 1926. Danish laws provide that the mortgage shall be on the entire holding, including land, buildings, equipment, and stock.

With respect to the rank which the mortgages take, it may be mentioned that in Germany the Prussian Land Rent Bank Act of 1927 provides that the Land Rent Bank is entitled to step in only in case the mortgage has priority over all other mortgages.

Another way in which loans to small holders are secured is through public guarantees. By the Act of 1919, English County councils were empowered to guarantee the repayment of equipment loans made to small holders by stock banks. The Danish State Bank, by an Act of 1919, was to guarantee the payment of semi-annual installments due from agricultural laborers on their holdings. In Norway, the land settlement acts provided for guarantees in some cases by the State, in others by the communes. The maximum guarantee for rural communes was fixed by the 1903 law at 150,000 crowns. The Swedish Government in 1919 or 1920 deposited with the Royal Bank of Sweden bonds to the value of 100,000 crowns, as security for the operations of the Central Institutes.

Still another form of security which has sometimes been employed is life insurance. The small holder, when borrowing money, insures his life in favor of the credit institution. Denmark made such provision in a law of 1920.^{40/}

^{40/} This form of security was utilized to a considerable extent by France, provisions regarding it being included in several successive laws, of which the earliest dates from 1908.

7. Period of loans

In England the Small Holdings and Allotments Acts of 1907 and 1908 provided that land purchase loans made by the Public Works Loan Commissioners to local authorities should not exceed the period of 80 years. This provision has been contained in the subsequent land settlement acts.

In the case of Germany, it has been customary to make loans for the purchase of land through the settlement agencies over a much shorter period of time. Such loans usually have been considered intermediate term loans, running not over more than three years. At the end of this period, the land settlement agencies have been expected to pay back the loan, since by that time they will, presumably, be able to sell the holdings which they prepared for the settlers, and to profit from the possibility of having the debt of the settler taken over by the land rent banks. In Sweden the limit of time for the payment of such loans was set at five years.

In the field of land improvement credit, in England the lending period for loans for the erection of buildings granted to local authorities amounted to 50 years under the Acts of 1892, 1907, and 1908. Under the Act of 1919, however, this period was extended to 60 years. In Germany the lending period for land improvement credit has usually been of an intermediate type, running not over more than 2 or 3 years.

As to equipment or initial establishment credit, a Treasury regulation dated December 8, 1919, given out in England provided that the period over which advances for livestock, fruit trees, seeds, fertilizers, and implements might be made should be determined by the county council at the time of sanctioning the advance, and that it should not be extended subsequently except with the specific approval of the Board of Agriculture and Fisheries. It was also said therein that the period should be determined in accordance with the following rules: "(a) The period of each advance shall not exceed the period during which, in the opinion of the council, the applicant may reasonably expect to recoup the expenditure proposed, and (b) in the case of advances for the purchase of livestock, fruit trees, and implements, the period shall not exceed 3 years, provided that in exceptional cases it may, with the special sanction of the Board of Agriculture and Fisheries, be extended to the maximum of 5 years from the date of the advance, and in the case of advances for the purchase of seeds or fertilizers, the period shall not exceed two years."

Relative to farm purchase credit, the English Small Holdings and Allotments Act of 1892 provided that the time of repayment of the residue of the purchase money, in case this

was to be paid in the form of a terminable annuity, should not exceed 50 years from the date of sale. This period remained the same in the following Acts of 1907 and 1908, but it was extended to 60 years by the Act of 1919. In Germany the period of repayment in the case of farm purchase credit amounted to about 60 years under the Prussian Land Settlement Act of 1891. In the post-war period, it was provided under the Prussian Land Rent Bank Act of 1927 that payments on the part of the settler should run over a period of about 50 years. Later on a plan was developed which would call for repayments over a period of about 70 years. The Danish provisions show marked changes in the successive acts regarding small holdings. The law of 1909 arranged for amortization over a period of 98 years. An Act passed five years later provided that the loan might continue, without the creditor's being able to call it in, as long as the holding was kept up properly. The law of 1928, however, set as the limit of the time of repayment the period of 30 years.

8. Termination of loans

Three major possibilities will be considered: first, the termination of the loan under ordinary circumstances; second, the termination of the loan in case contract provisions are violated; and third, the establishment of a perpetual charge against the holding. Under ordinary circumstances the loan can usually not be recalled by the creditor as long as the settler fulfills the provisions of the contract. On the other hand, it has, in some cases, been made possible for the settler to terminate his indebtedness prematurely in case he so desires. In England, apparently, the settler is allowed to terminate his loan at any time he desires. With respect to Germany, the Prussian Land Rent Bank Act of 1927 provides that prepayment of the loan is not to take place in the first 10 years unless such action is approved by the land settlement authorities.

Provisions have usually been made that in case the conditions attached to the advances were not complied with, the loan should be repayable on demand by the creditor. With regard to loans for land improvement, the regulation of the Prussian Ministries of Agriculture and Public Welfare of April 12, 1928, concerning funds of land rent tax, provided that the loan would have to be repaid at once if, without the consent of the State (a) the construction of the buildings is not in accordance with the plans submitted; (b) the debtor does not fulfill his other obligations; (c) the holding is sold; (d) the buildings are not sufficiently insured against fire.

Under the Prussian Land Rent Bank Act of 1927, the immediate repayment of the long term loan granted for the purchase

of a holding may be asked, if (a) the settler or a third person manages the holding in such a way that its value deteriorates, and thereby diminishes the value of the loan; (b) the settler does not comply with requirements relative to the orderly maintenance of the buildings; (c) the settler falls into bankruptcy or has to be compelled to make his payments by means of foreclosure, or if the holding is being foreclosed; (d) the property is being transferred to a person other than the wife of the settler or one of his descendants.

A case in which the repayment of the entire amount of the loan was precluded and perpetual charge against the holding was created, occurred in German land settlement in connection with the activities of the Prussian Land Settlement Commission in Posen and West Prussia. For political reasons the Land Settlement Commission decided that the settler should not be allowed to pay back one-tenth of the purchase loan.

9. Postponement of Payment

Two different types of postponements are to be considered. The first one deals with postponement at the time when the holding is taken over by the settler. The second one refers to postponements which take place later than at the beginning of the occupation of the holding. In all the countries concerned, postponements of the first type have usually been granted for the purpose of making it easier for the settler to begin his work on his new holding. Such action may be justified by the fact that it usually takes the settler a number of years to become adjusted to his new surroundings, and to develop his farm to the full extent. The English Small Holdings Act of 1892 authorized the county council to postpone for a term not exceeding 5 years the time for the payment of all or any part of an installment of principal or interest, or of the terminable annuity, in consideration of capital expenditure by the purchaser which, in the opinion of the council, increases the value of the holding. Similar provision was made in the Act of 1926.

In Germany the Federal Regulations of June 21, 1929 made it possible to postpone interest payments on the Federal funds for one year in connection with the granting of land purchase and improvement credits. Also, in the Scandinavian countries such deferments have been allowed in the various land settlement acts. Thus, for instance, the Danish Act of 1924 established an amortization-free period for the first five years with respect to loans for the purchase of land and the erection of buildings. In Norway a decree of the Department of Agriculture of May 1929 provided that at the request of the settler, it might be ruled that not only no amortization payments, but also no interest payments would have to be made during the first five years after the holding was taken over. Under the Federal Regulations of June 26, 1929, concerning

the granting of equipment credit in Germany no interest or amortization were to be paid for the first two years starting with the date of the making of the loan.

One example in which payments were postponed later than the time when the holdings were taken over, occurred in Germany in 1933. In that case payments were postponed in consideration of the serious effects which the general economic depression had upon the settlers. It was ruled that all settlers should be freed of installment payments for the period from July 1, 1931 to December 31, 1933. The payments were not waived altogether, but were only postponed. It was provided that the time of payment should be prolonged correspondingly.

10. Stretching of credit funds

The stretching of funds has played a very important role in Germany due to the fact that in that country great lack of capital occurred in the post-war period. Efforts have, therefore, been repeatedly made to conserve the funds as much as possible. One way by which this was made possible was through the policy of abstaining from removing the existing mortgages on the land, and of inducing the creditors to let these mortgages remain on the land regardless of the fact that it was going to be used for subdivision. It has, however, not often been possible to accomplish this aim due to the fact that creditors have frequently insisted upon the repayment of their loans in case the land was to be subdivided. It is interesting to note that an amendment to the German Land Settlement Act of 1919, dated January 4, 1935, makes it possible to prevent the holders of mortgages from recalling their loans, by bringing about their agreement to subdivide their mortgages in accordance with the subdivision of the land.

Disposal of Funds in the Form of Subsidies

1. Eligibility of settlement agencies

By the English Acts of 1907, 1908, and 1916, the Board of Agriculture and Fisheries and the local authorities were authorized not only to make loans, but also grants to cooperative land-settlement associations. A similar provision was put into the Norwegian Land Settlement Act of November 20, 1920. Government grants were also made to an English semi-public agency, the Agricultural Organization Society, from 1909 to 1923.

2. Limits as to amount of subsidies

In the course of the granting of subsidies in the period from 1920 to 1922 in Denmark, the Act of August 7, 1922 provided that the relationship between loans and subsidies should be 75 to 15. The ratio for 1921 had been 75 to 25. In Norway the subsidy granted to land settlement associations usually represented three times the amount these agencies had been able to secure from sources other than governmental.

As to subsidies paid in connection with the covering of administrative expenses, the Board of Agriculture and Fisheries of England was authorized in 1907 to repay one-half of the expenses incurred by the council in ascertaining the demand for small holdings in counties and boroughs, and also to refund expenses incurred in connection with the acquisition of land. All the salaries and remunerations of the commissioners and officers appointed by the Ministry of Agriculture were paid out of funds provided by Parliament without being charged to land settlement projects of local authorities.

In connection with land improvement work, the Norwegian Government has repeatedly paid subsidies to settlers who were willing to reclaim new land or to make improvements on the land on which they had settled. These subsidies at times amounted to one-quarter of the cost of such operations. The Swedish government, moreover, met one-third of the expense of all new tillage which was begun and finished between July 1, 1919 and July 1, 1920.

The degree to which the subsidies have been paid in connection with efforts to lower the interest rate on loans made to settlement agencies and settlers has varied in the different countries. Under the regulations of November 10, 1931, established by the German Federal Government, it was provided that in connection with the lowering of interest rates to be paid on mortgages which were to remain on land bought for settlement purposes, subsidies should be paid to an extent which would make it possible to keep these interest rates below 5 percent.

In order to decrease the cost of public service facilities for new settlements, the Prussian Government agreed to pay as much as 50 percent of these costs in the form of subsidies.

Disposal of Settlers' Own Funds

1. Amount of capital asked in the form of down payment

The English Small Holdings Act of 1892 provided that in case a settler purchased a holding, he should pay not less than

one-fifth of the purchase money in the form of a down payment. The Small Holdings and Allotments Acts of 1907 and 1908 contained the same requirements. Under the Land Settlement (Facilities) Act it was possible to acquire a holding without such a down-payment. The 1926 Act again demanded a down payment, amounting to at least one semiannual installment, on completion of the purchase.

The Prussian Land Settlement Commission for Posen and West Prussia made it a rule that the settlers should be able to muster as much as one-third of the land price at the time when they would take over a holding. However, it also occurred that holdings sold to settlers by that Commission were granted loans up to 100 percent of the value of the funds.

Under the German (Prussian) Act of 1891, the settlers had, if they received only land rent bank credit, to furnish 25 percent of the price of the holding in the form of a down payment. There was, of course, the possibility that land settlement agencies might agree to accept a mortgage with respect to part of the remainder of the purchase price, with the result that the settlers had to pay down less. In 1916 an amendment to the Act of 1891 increased the loan limit from 75 to 90 percent with respect to holdings operated by family labor without any permanent hired help. As a result, it was possible from then on to acquire such holdings with the help of rent bank credit by a down payment of 10 percent.

Under the influence of rising settlement costs in the post-war period, the rates of down payment tended to become much higher than they had been before. The following table shows how much capital the German semi-public land settlement agencies were asking by 1928 in case of the sale of holdings of the size and value indicated:

(See next page for table)

Table 9. Cost of holdings and value of down payment
and equipment asked in connection with
holdings established by land settlement
agencies in Germany 1928^{41/}
(For rates of exchange, see Table 18 end of article)

Land Settlement Agencies	: Size of : Holdings : (acres)	: : Price : (marks)	: Value of down : payment and : equipment (marks)
Oberschlesische Landgesellschaft	37-43	.30-35 000.	11,000
Schlesische Landgesellschaft	. 36-38	.50-63 000.	18-20 000
Eigene Scholle	. 37-50	.35-62 000.	12-17 000
Pommersche Landgesellschaft	. 50	. -	12 000
Mecklenburgische Landgesell- schaft	. 37-50	. 30 000.	12 500
Landbank	. 37-56	. 38 000.	11-12 000
Grenzmarksiedlung	. 37-50	. -	11-12 500
Deutsche Ansiedlungsbank	. 37-50	. -	11-13 000
Ostpreussische L.-G.	. 37	. 30 000.	7-8 000

On the basis of the loan limits established in the Scandinavian land-settlement acts, the settlers in Denmark and Norway, when buying homesteads, were required to pay down 10 percent of the price; in Sweden they were obliged to pay down one-sixth of the value.

2. Amount of capital asked for other purposes

Apart from making a down payment, settlers have also often been asked to furnish a certain amount of capital in the form of equipment. In this connection it is to be noted that in the Federal Regulations of June 21, 1929, the settlers are required to bring along the equipment needed for orderly operation of the holding, or to show that they possess the necessary funds to buy such equipment.

Non-settler funds invested in land settlement

In the following section an attempt will be made to give an idea of the amount of non-settler funds which have actually found their way into land settlement. The data available on this point are, in several instances, rather fragmentary. Sometimes they refer only to loans. In other cases they refer to both loans and subsidies. The data on subsidies are most incomplete.

^{41/} Das laendliche Siedlungswesen nach dem Kriege, Unterausschuss fuer Landwirtschaft, Band 10, Berlin, 1930, p. 142.

1. Loan funds

England

So far as the creation of small holdings in England is concerned, the following table shows the amounts of money advanced on the part of the Public Works Loan Commissioners to local agencies from 1893 to 1933. It also reports the number of small holdings which have been created in those years. Apart from these loan funds, the local authorities also had at their disposal a certain amount of capital derived from local taxation or borrowings. Just how much money they used from these sources is not known.

Table 10. Number of small holdings created and amount of loans made to county councils for the purpose of small holdings by the Public Works Loan Commissioners 1893-1933^{42/}
(For rates of exchange, see Table 18 end of article)

Year	:No. of Hold- : ings : created :	:Amount of :loans in :English : pounds	::	Year	:No. of Hold- : ings : created :	: Amount of : loans in : English : pounds
1893	1	-	::	1914	1,510	687,041
1894	137	6,500 ^{b/}	::	1915)		153,949
1895	1	-	::	1916)		799
1896	17		::	1917)	946	215
1897	15		::	1918)		1,591
1898	-	2,650 ^{b/}	::	1919	3,485	4,131,865
1899			::	1920	7,089	5,836,191 ^{a/}
1900			::	1921	4,445	2,425,861
1901			::	1922	1,681	926,198
1902)			::	1923)		633,195
1903)			::	1924)		378,229
1904)			::	1925)		533,435
1905)	^{e/}		::	1926)	^{c/}	^{d/}
1906)			::	1927	121	36,869
1907)		4,436	::	1928	153	35,582
1908	504	158,811	::	1929	146	23,009
1909	2,537	680,995	::	1930	250	93,670
1910	2,484	758,041	::	1931	273	104,350
1911	2,360	787,252	::	1932	241	48,959
1912	2,307	1,052,280	::	1933	213	2,085
1913	2,679	927,017	::	Total	33602	20,431,075

^{a/} Figures for 1919-26 represent loans out of the Land Settlement (Public Works Loans) Fund, which was also administered by the Public Works Loan Commissioners.

^{b/} The loans in 1894 and 1898 were made to a single county council.

^{c/} No data available.

^{d/} In 1926 the only advances were installments of loans already promised, and are included in the figures for 1919-25; these final installments amounted to 128,210 pounds.

^{e/} No information available, but it is believed that the area acquired during the period 1902-07 did not exceed 200 acres.

^{42/} Data compiled from reports of Board (Ministry) of Agriculture and Fisheries, and from annual reports of Public Works Loans Commissioners.

Denmark

The following table illustrates the amount of public loans which were advanced to settlers in Denmark under the Acts for the creation of owner-operated new holdings, and the number of such holdings established with the aid of these loans in the period from 1900 to 1932:

Table 11. Number of holdings established and amount of state loans granted for agricultural holdings on land bought by settlers in Denmark 1900-32^{43/}

(For rates of exchange, see Table 18 end of article)

Year	Number of holdings	Amount of loans (Danish crowns)
1900-05	1,859	6,530,000
1905-10	3,233	14,819,000
1910-15	2,544	15,718,000
1915-16	565	4,214,000
1916-17	413	3,192,000
1917-18	274	2,118,000
1918-19	225	1,934,000
1919-20	150	1,311,000
1920-21	137	1,273,000
1921-22	460	5,293,000
1922-23	964	12,629,000
1923-24	626	10,616,000
1924-25	547	9,072,000
1925-26	561	9,914,000
1926-27	570	9,631,000
1927-28	626	9,634,000
1928-29	520	7,566,000
1929-30	379	5,488,000
1930-31	401	5,728,000
1931-32	435	6,557,000
Total	15,489	143,237,000

The loans advanced and the number of holdings created under the Danish Act of 1919, under which the State of Denmark was authorized to acquire land, to rent farms to settlers, and to make advances for the construction of buildings have, up to 1929, been as follows:

^{43/} Based on data given in: Small Holdings in Denmark, Danish Foreign Office Journal, October 1924, No. 45, p. 112, and Consular Report on Danish Land Laws and the Establishment of Small Holdings, by E. Gjessing, 1934. p. 22-23.

Table 12. Number of rent holdings established and
amount of loans made under Rent Holding
Act in Denmark - of October 4, 1919^{44/}

(For rates of exchange, see Table 18 end of article)

Year	Number of Holdings	Amount of Loans (crowns)
1920	195	3,100,000
1921	333	5,400,000
1922	658	7,900,000
1923	652	7,500,000
1924	413	5,000,000
1925	606	7,500,000
1926	530	5,500,000
1927	438	4,100,000
1928	270	2,400,000
1929	132	1,188,000
1920-1929	4,227	49,588,000

In the case of Norway in 1927 the Land Settlement Bank made advances to settlers on agricultural holdings amounting to 86,000,000 crowns.^{45/}

In the period from 1905 to 1929, the following government loans were granted for agricultural holdings in Sweden:

Table 13. Number and amount of government loans granted
for agricultural holdings in Sweden 1905-29^{46/}
(For rates of exchange, see Table 18 end of article)

Year	Number of loans	Amount of Loans (Swedish crowns)
1905	664	1,421,880
1906	441	1,032,989
1907	645	1,673,475
1908	956	2,711,664
1909	1,123	3,241,055
1910	1,312	3,868,210
1911	1,096	3,281,660
1912	1,183	3,321,334
1913	1,425	4,451,575
1914	1,340	4,309,325
1915	1,090	3,477,510
1916	1,089	3,545,470
1917	969	3,378,080
1918	823	3,101,800
1919	983	4,751,860
1920	1,193	6,294,525
1921	1,430	7,390,100
1922	2,356	11,008,300

Table 13 cont'd.

Year	Number of loans	Amount of Loans (Swedish crowns)
1923	2,073	10,467,524
1924	2,126	11,061,600
1925	2,041	10,995,700
1926	2,206	11,942,000
1927	2,350	12,513,000
1928	2,198	11,358,000
1929	2,260	11,388,050
Total	35,372	151,986,686

2. Subsidies

Only a few instances of subsidies are given, covering some of the most important grants which have gone into land settlement in the various countries under consideration. According to the post-war Federal Inquiry Committee on German agricultural settlement, the following subsidies were paid annually by the Prussian agricultural administration for the covering of expenditures regarding public service facilities, expenditure of public service land settlement agencies and losses in connection with the sale of rent bonds in the period from 1899 to 1919.

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- 44/ J. Frost. Die daenische Haeusler-Siedlung von 1900-1930. Berichte ueber Landwirtschaft, Band XIII, 1930, Heft 3, p. 420.
- 45/ Ibid., p. 284.
- 46/ Based on data given in a report of the Swedish Land Settlement Board entitled "Das laendliche Siedlungswesen in Schweden", p. 9.

Table 14. Amount of annual subsidies paid by the Prussian agricultural administration for the covering of expenditure regarding public service facilities, expenditure of public service land settlement agencies, and losses in connection with sale of rent bonds, 1898-1919^{47/}

(For rates of exchange, see Table 18 end of article)

Period	Amount in marks
1898-1904	120,200,000 M.
1905-09	2,198,000
1910-12	1,718,000
1913-14	1,218,000
1915	600,000
1916-19	1,100,000

In Denmark the direct subsidies paid for the erection of buildings in the period from 1921 to 1923 amounted to 1,869,000 crowns in 1921; 4,883,000 crowns in 1922; and 1,499,000 crowns in 1923. These grants formed a very large portion of the aggregate loans and grants made in those years for the establishment of agricultural holdings.

According to a statement made by Frost, which was based on information obtained from the Agricultural Department of Norway, subsidies amounting to 6,300,000 crowns were paid for the erection of buildings, and subsidies amounting to 4,376,000 crowns were paid for the lowering of interest rates in the period from 1921 to 1928.^{48/}

3. All non-settler funds invested

For England it has been estimated that the capital cost of the holdings provided under the Act of 1908 was about 5,500,000 pounds. The amount of non-settler funds supplied for the purpose of carrying out the Land Settlement Scheme under the Land Settlement (Facilities) Act of 1919 has been much larger. The total capital expenditure under the Act for England and Wales has been extended to 15,250,000 pounds. Up to 1932 another sum of about 1,000,000 pounds had been invested in small holdings created under the Small Holdings and Allotments Act of 1926. This means that non-settler funds amounting altogether to more than 22,700,000 pounds have been invested in the period from 1908 to 1933, during which some 30,000 new small holdings were established.

With respect to Germany, the Prussian Land Settlement Commission for Posen and West Prussia spent approximately 500,000 marks in connection with the creation of 21,749 holdings up to the end of 1917.

^{47/}Das laendliche Siedlungswesen nach dem Kriege, Unterausschuss fuer Landwirtschaft, Band 10, Berlin 1930, p. 28.

^{48/}J.Frost. Op. Cit., 1930, Vol. 11, Heft 2, p. 287.

The 14,000 small holdings developed in Denmark since 1899 required altogether 132,000,000 crowns in the form of loans and grants from the exchequer.^{49/}

Settler funds invested at time of settlement

There are very few data with regard to the question of how much capital the settlers invested in their new holdings at the time when they took them over. So far as the capital supplied in the form of down payment is concerned, the following table indicates the amounts which were paid by the German settlers both before the War and in the post-war years, 1924-28:

Table 15. Percent of purchase price for new holdings paid in the form of down payments by settlers in Germany before and after the World War^{50/}
(For rates of exchange, see Table 18 end of article)

Region	Before the World War	After World War			
		Settlements Established by			
		Semi-public Agencies		Private Agencies	
		1924/28	1928	1924/28	1928
Upper Silesia	16.7	21.6	21.0	-	-
Lower Silesia	16.7	24.8	29.5	26.5	28.9
Brandenburg	9.1	27.9	27.9	24.8	24.4
Grenzmark	-	22.3	19.7	24.3	23.1
East Prussia	27.7	25.8	22.5	-	-
Pomerania	24.7	27.1	25.9	25.3	23.8
Mecklenburg	-	19.6	16.3	26.9	25.9
Average	19.0	25.4	24.3	26.5	25.3

These figures show that the payments have, on the average, been above the minimum rate of 10 percent established in the German land settlement laws and regulations.

Repayments

1. Degree of repayments and arrears

So far as England and Wales are concerned, settlers have met their payment obligations with a high degree of regularity in the pre-war period. In its report of 1910 the Land Division of the Board of Agriculture and Fisheries pointed out that "it is satisfactory to find that in every county except three, it is reported that the rents

^{49/} K.J. Kristensen. Public Guidance in Rural Land Utilization in Denmark. The Annals, July 1930, p.232.

^{50/} Das laendliche Siedlungswesen nach dem Kriege, etc. Op. cit., p. 62.

have, with very few exceptions, been duly paid. In most cases the arrears, if any, are under 10 pounds." Similar statements occurred in the reports of the Land Division on this subject for 1911, 1912, 1913 and 1914.

Also a report on the working of small holdings acquired under the Small Holdings and Allotments Act of 1908, submitted by the Board to Parliament in 1918, speaks in very favorable terms of the extent to which payments had been made by settlers up to that time. Out of this report the following summary table has been made:

Table 16. Degree of repayment by settlers on small holdings created in 42 counties of England and Wales, up to 1918^{51/}
(For rates of exchange, see Table 18 end of article)

Item	: 34 counties: : in England	: 8 counties: : in Wales	: All 42 coun- : ties reporting
Total number of council's tenants	9,651	621	10,272
No. of tenants who have quit (ex- cluding those who have died, joined Army or taken holdings elsewhere)	694	13	707
No. of tenants who must be regarded as failures	479	14	493
Ratio of no. of failures to total no. of tenants	5.0%	2.3%	4.8%
Total acreage acquired or agreed to be acquired for holdings by county councils up to Dec.31, 1914	84,706	7,308	92,014
Acreage occupied by failures among 'councils' tenants in 26 of the 50 counties in England, and in 3 of the 12 counties in Wales, in which councils had provided holdings by December 31, 1914	5,484	299	5,783
Percentage of total acreage oc- cupied by failures	6.5%	4.1%	6.3%
Total rents collected since Jan.1, 1908 (pounds)	1,428,242	103,990	1,532,232
Arrears of rent - outstanding	1,133	27	1,160
Irrecoverable	2,220	78	2,298
Ratio of amount of irrecoverable arrears to total rents collected	0.15%	0.075%	0.15%

^{51/} Compiled from data of table given in Board of Agriculture & Fish-eries. "Report on the Working of Small Holdings acquired under the Small Holdings and Allotments Act, 1908". 1918, p. 6. This report, p. 1, refers to that table as follows: "The Table...has been pre-pared showing, as far as practicable, the result of the Board's inquiry. Particulars are not available as regards certain

From this table it appears that out of 10,272 tenants, 4.8%, or 493, were failures. The table also shows that for only two counties the percentage of the recoverable arrears to total rents collected was high as 1 percent, and that for 8 counties it was nil.

No statements are available on the regularity with which repayments were made on the part of the settlers in Germany in the pre-war period. As to the post-war period, according to Bollert^{52/} the portion of payments not made to the Prussian Land Rent Bank by settlers placed on new holdings in the State of Prussia on account of approved postponements or unapproved non-fulfillment of their payment obligations amounted to only 7.4 percent on January 1, 1930, and after omitting the payments of so-called remnant holdings^{53/}, 11.3 percent on January 1, 1931.^{54/} Under the influence of the agricultural depression of the last few years, the percentage of non-payments has probably been much higher.

2. Reduction or revision of repayments

Also in this case the information available is rather limited. Some instances are, however, known in which both in England and in Germany, abatements and revisions of repayments have occurred.

So far as England is concerned, the serious drought of 1921 and the unprecedented fall in agricultural prices which took place in 1922 affected very severely the settlements created by the Ministry of Agriculture, as well as the majority of statutory small holdings settled since the Armistice. In consideration of these events, the Minister of Agriculture found it necessary to make substantial reduction in the amount of rents to be paid by the settlers placed on small holdings colonies under the Acts of 1916 and 1918. Furthermore, temporary revision of the rents paid by councils' tenants was promptly made, and at a later date the revaluation of each of these holdings was made, and a new rent fixed at a figure which the Ministry was advised by technical officers was such as could now be obtained by suitable and experienced applicants if the holding became vacant and was available for letting in the open market.^{55/}

51/ cont'd.

Counties owing to the fact that some of the Councils' Small Holdings Staffs have been so depleted either by the calls of military service or the demands made on the time of officials who are working for the Agricultural Executive Committees which have been appointed to deal with questions of ploughing up grass land, cultivations, etc."

52/ Bollert. "Das naechste Ziel in der laendlichen Siedlung" in Die deutsche laendliche Siedlung, Berlin, 1931, p. 207.

53/ Holdings representing the remainder of a large estate which has been subdivided.

54/ See also E. Lang, "Bedeutung und Organisation der laendlichen Siedlung in Deutschland" in die Deutsche Landwirtschaft, Berlin, 1932, p. 70.

In Germany an important measure with respect to the readjustment of repayments on the part of settlers was taken by the Federal Ministry of Agriculture in November 1933. In a decree dated November 8, 1933, the Minister ruled that for the period from July 1, 1931 to December 31, 1933, all settlers placed on new holdings between April 1, 1922 and December 1, 1933, with the assistance of Federal or State funds should be freed of their payment obligations. At the same time the Minister decreed that the land settlement agencies should undertake to collect all arrears which had accumulated during the period prior to July 1, 1931, and should see that these collections are made until December 31, 1934. The land settlement agencies were made responsible for the collection of these arrears.

A further revision of repayments took place under a decree of the Federal and Prussian Ministers of Agriculture dated February 25, 1935. Under this decree the annual payments on the part of the settlers on land settlement zones were fixed at $2\frac{1}{2}$ percent for Zone No. 1, and 3 percent for the second and third zones for the period from January 1 to December 31, 1935. It was further provided that no amortization payments would have to be made during that period. This later decree, however, affects only settlers which were established on new holdings during the period from April 1, 1924 to November 31, 1933.

3. Extent of losses

In England the net income from holdings established under the Act of 1908 up to the end of 1918 was sufficient to pay the interest and redemption charges on the capital of 5,500,000 pounds invested in the holdings. By and large, therefore, no losses occurred.^{56/}

Considerable losses occurred, however, in connection with the land settlement projects developed under the Land Settlement Facilities Act of 1919. The total of these losses has been approximately 9,500,000 pounds. This is equivalent to about 38 pounds per acre, and over 550 pounds per tenant.^{57/} In 1925 the net income of

^{55/} Report of Proceedings of the Small Holding Colonies Acts, 1916 and 1918, and the Sailors and Soldiers (Gifts for Land Settlement) Act of 1916, for the 12 months ended March 31, 1931, pp. 14f.; and Land Settlement made in England and Wales, 1919-1924, p. 24.

^{56/} Viscount Astor and Keith A.H. Murray. Land and Life: the Economic National Policy for Agriculture, 1932, p. 140.

^{57/} Second Report of the Select Committee on Estimates (Ministry of Agriculture), August 5, 1925.

the councils from the holdings established was estimated at 400,000 pounds per annum, which represents about 2 percent of the capital cost, after making allowance from the existing gross rental value for future contingencies over a long period, as well as for the usual costs of administration, repairs, renewals, etc.^{58/}

The capital loss which occurred in connection with 10 estates subdivided into small holdings colonies under the Acts of 1916 and 1918 has been established at 61,114 pounds.^{59/} There were 14 settlements originally. The losses for all of these have not been ascertained. With respect to those settlements which were still in the hands of the Ministry in 1926, total liabilities in the years 1925 to 1926 have apparently been 216,876 pounds.^{60/}

No statements on losses are available with respect to Denmark and Norway. In regard to land settlement in Sweden, it is interesting to note that in the opinion of Frost "neither the state nor the land settlement agencies have suffered substantial losses in spite of war and inflation."^{61/}

4. Methods of covering losses

An interesting scheme of covering losses suffered by local land settlement agencies has been developed in England. This scheme started with the Small Holdings and Allotments Acts of 1907 and 1908, by which the Board of Agriculture and Fisheries was authorized to pay out of the Small Holdings Account the whole or any part of a loss incurred in connection with schemes carried out by county councils. The payment of such losses was to be made out of the Small Holdings Account with the consent of the Chancellor of the Exchequer.

Under the rules of a circular issued by the Treasury December 31, 1907, the contributions ^{toward losses} on the part of the Board of Agriculture to the county councils was fixed at 50 percent. The conditions under which payments were to be made by the Board were established as follows:

"1. Any Local Authority desiring to claim a grant should make application to the Board of Agriculture and Fisheries.

"The application should be accompanied by an account of the income and expenditure of the Local Authority in respect of the

^{58/} Viscount Astor and Keith A.H. Murray. Op. cit., p. 140.

^{59/} Parliamentary Debates: Commons. 1930, 244:1952.

^{60/} Compare Report of Proceedings under the Small Holdings Colonies Acts, 1916 and 1918, and Sailors and Soldiers (Gifts for Land Settlement) Act, 1916, for the years 1923-1926, p. 80.

^{61/} J.Frost. Laendliche Siedlungswesen in Schweden. Op. Cit., Vol.X, 1929, Heft 3, p. 446.

scheme for the period to which the claim relates, and a balance sheet showing the assets and liabilities of the authority in connection therewith.

"2. The Board should certify that they are satisfied --

- (i) that the loss cannot reasonably be expected to be recouped out of receipts from the future working of the scheme;
- (ii) that the loss is not due to (a) excessive price or rent agreed to be paid by the council; (b) unreasonable expenditure on equipment; (c) insufficient care in selection of tenants and the subsequent supervision of their proceedings; (d) an undue proportion of the general small holdings expenses of the Council being charged to the scheme;
- (iii) that the Council have in the case of holdings let used their best endeavors to obtain rents fixed at amounts which might reasonably be expected to be sufficient to recoup to the Council all expenses incurred in the acquisition of the land (including repayment of capital where the land is purchased) or in the adaptation or subsequent management of the land;
- (iv) that the Council have in the case of holdings sold conformed with the requirements of the Small Holdings Acts;
- (v) that the Council have taken full advantage of their borrowing powers;
- (vi) that the Council have acted reasonably in carrying out the scheme;
- (vii) in the case of loss on a scheme prepared under section 3 (3) of the Small Holdings and Allotments Act, 1907, that the total receipts of the council under the Small Holdings Acts for the current financial year (with any balance of such receipts brought forward from the previous year) will be insufficient to defray their expenditure under the said Acts unless the Council receive the contribution applied for.

"3. The Treasury reserves a right to make independent inquiry into the circumstances if it thinks fit." ^{62/}

The Land Settlement Facilities Act of 1919, which was to foster the settlement of ex-service men after the World War, went even so far as to provide that the Ministry of Agriculture should

pay all necessary and reasonable losses incurred by councils up to March 31, 1926. Also under the Small Holdings and Allotments Act of 1926 the Ministry of Agriculture was authorized to contribute to losses suffered by county councils. In this case it was ruled that 75 percent of all losses in regard to settlement projects approved by the Ministry, and undertaken with the expectation of a loss, were to be repaid.

In the Special Areas Development and Improvement Act of 1934 it was stipulated that a county council, in determining for the purposes of the Act of 1926 whether the provision of small holdings would entail a loss, and the Ministry of Agriculture and Fisheries, in determining the amount of any contribution out of moneys provided by Parliament toward the losses likely to be incurred in carrying out any proposals submitted to him, may disregard the whole or any part of any contributions made or to be made under this Act of 1934 toward the provision of small holdings.

Results of Financing Policies

1. Sufficiency of capital supplied

In all countries concerned, the amount of capital made available for land settlement operations has been greatly influenced by general financial developments. These developments have, therefore, to be kept in mind when the financing operations of the various governments in the field of land settlement are appraised from the standpoint of sufficiency.

Before the World War, apparently in all countries concerned, sufficient means were made available. During the World War the English land settlement funds were rather small, due to the fact that the Government curtailed the advances made by the Public Works Loan Commissioners for land settlement. After the World War, there was a considerable shortage of land settlement funds in Germany during the period from 1919 to 1926. Describing the developments during that period, the Federal Inquiry Committee which investigated agricultural settlement in Germany in the post-war period, pointed out in its report:

"As early as 1922 all financial resources for land settlement had become exhausted on account of the inflation. It is true that the State tried to relieve the condition with respect to the construction of buildings on new holdings by constantly increasing its appropriations for such purposes, but every time fewer results were accomplished. No more funds were available for the purchase of land. In the board meetings of the land settlement agencies the representatives of the Government pointed out that it would be impossible to

make available further public funds in the near future. (Report of the Society for the Promotion of Internal Colonization) Since the Rent Banks were no longer able to place 4 percent Rent Bank bonds, the land settlement agencies found themselves in a position in which their own capital as well as the intermediate credits which they had borrowed from the State and the Neuland A.G. were completely tied up. Under these circumstances all further possibilities of financing land settlement seemed to be gone, and the land settlement agencies seemed to be exposed to the same danger of complete passivity as the Prussian Rent Banks."^{63/}

In the time which followed immediately after the stabilization of the currency in 1924, conditions of land settlement financing did not become better, but even grew worse. It was not until 1926 that the financial difficulties in the field of German land settlement were removed. In that year, and in the following four years thereafter the Federal Government made available substantial sums of new intermediate credit amounting altogether to about 250,000,000 marks.

It is interesting to note that in spite of the lack of funds during the period of inflation, no large decrease in the number of new holdings created occurred. This is explained by the facts that the low prices of land which existed at that time more than offset the lack of funds, and that for a long time land was sold under the influence of the confusion and ignorance about the exact value of things prevalent in those days; and also by the fact that the supply of land was influenced by the exercise of the right of expropriation. In those days the price of land settlement land amounted to about one-tenth of the pre-war price. What was going on, therefore, meant that on account of these low returns for land, the burden of financing was largely shifted over to the owners of large estates who were supplying land for settlement.^{64/} In all the other countries, apparently, ample funds were available for land settlement in the post-war period.

Before the World War the German semi-public agencies had large funds of their own. During the post-war period, however, they have been suffering from too small a basic capital. As pointed out previously, they lost most of their own capital in the period of heavy currency depreciation from 1919 to 1923. To rebuild their resources was very difficult on account of the great scarcity of capital in Germany in the post-war period; public finances were in a very stringent condition. To what extent they have contributed to the upbuilding of the settlement agencies' own funds may be explained by quoting the following statement by Massmann:

^{63/} Das laendliche Siedlungswesen nach dem Kriege. Op. cit., p. 32.

^{64/} Ibid., p. 27.

"The Prussian State and the Prussian provinces have not been able to replenish these funds sufficiently. At that time after stabilization it was impossible to induce private financial interests to make investments in the land settlement agencies, primarily because, during the period of high interest and discount rates of the Reichsbank, the unchanged legal provisions concerning the character of public utility enterprises (maximum rate of dividend: 5 percent) had the effect of deterring all private capital. For these reasons, even at the time of increasing land settlement activities (1929, 1930, 1931) the operating capital of the land settlement agencies remained far behind the requirements of the land settlement work. The ratio between the means of the land settlement agencies and the intermediate credits routed through these agencies became worse and worse. This had the effect of making the financial conditions of the land settlement agencies more and more difficult. By the scarcity of capital in the ranks of the land settlement agencies which forced these agencies to obtain [private] bank credit at high interest rates, land settlement was handicapped considerably and made more expensive."^{65/}

2. The German rye bond experiment

The experiment of the German Rye Rent Bank is unique in the land settlement financing activities of the countries under review. It is connected with the post-war inflation which wrecked the German currency and destroyed the previous land settlement funds. With the help of this bank, it was actually possible to create a financial basis on which land settlement activities could be continued.

The Rye Rent Bank brought relief in a serious financial emergency in land settlement. It was effective as long as the inflation lasted, and the refugee settlement which took place during that time would hardly have been possible without this bank. After the currency had been stabilized, however, the usefulness of the rye rent system disappeared, due to the drop in the value of the rye rent bonds. The reason for this is well explained in the following statement:

"The usefulness of the rye rent bond as a means of financing land settlement disappeared on account of the fact that the investing public immediately, when it no longer feared further inflation, ceased to give the rye rent bonds, as compared with the new currency, a premium value, and when, on the contrary, the low yield of interest on rye rent bonds caused the value of the bonds to decline far below parity. At that time the rates of interest

^{65/} Karl Massmann. Op. cit., p. 12-13.

for short-term money fluctuated by several hundred percent depending upon the length of the lending period and the kind of lending agency or borrower. Even the Prussian State Bank asked 2 percent per day for call money in Rentenmarks in December 1923. Even in the middle of 1924 a farmer, looking for credit, had to pay a rate of interest of about 50 to 75 percent. Accordingly the rye rent bonds were quoted at a very heavy disagio with the result that at the most unfavorable moment the quotation of the bonds at the stock exchange declined to 1.80 marks, while at the same time rye was quoted at 6.50 marks. It goes without saying that land settlement was unable to operate at the high rates mentioned for short-term money, and to meet such a heavy disagio in connection with the usage of rye rent bonds. Both possibilities of financing were, thereby, wiped out."^{66/}

3. Cost of land settlement funds

General financial conditions not only influenced the size of the settlement funds made available for settlement, but also the cost of these funds. However, in the case of the rates charged for land settlement loans, public authorities were able to decrease this cost by subsidies, if they chose to do so.

The rates of 6 and 5 percent, which were charged in the field of English post-war settlement up to 1923, have been considered too high. In the opinion of the Ministry of Agriculture, they were mainly to blame for the uneconomic outcome of the land settlement scheme under the Land Settlement (Facilities) Act of 1919. Also the rates charged in the first few years of the operation of the Act of 1926 have been considered too high, and the opinion has been expressed by the Ministry that they have retarded land settlement activities. In its report for the period from 1919 to 1924 the Ministry said:

"...The increased cost of land and existing buildings has been the least important factor in rendering the scheme uneconomic. The most important factor ... has been the rate of interest charged on all capital monies raised for the purpose; next to this comes the cost of building; thirdly, the high cost of management, repairs, etc., largely due to the inevitable increase in salaries and wages owing to the high cost of living. The increase in the cost of land would not in itself have resulted in a loss of more than two or three shillings per acre per annum, having regard to the concurrent rise in the rental value of agricultural land. The

^{66/} From a report of the settlement agency Neuland A.G. to the Federal Inquiry Committee, quoted in the report of the committee, p. 34.

other factors mentioned have, in many cases, resulted in losses of several pounds per acre per annum."⁶⁷

In the report on the work of the Land Division of the Ministry in 1927, it is stated:⁶⁸

"The comparative inactivity with regard to new acquisitions shown recently by county councils is ... capable of a very complete explanation. In the first place, it must be recognized that a public body cannot purchase agricultural properties and subdivide them with borrowed money for which 5 percent interest has to be paid without incurring what is called a 'financial loss', i.e., the difference between loan charges and net rents. Agricultural properties do not provide their owners with a net return of 5 percent; consequently 'loss' is inevitable if all capital money is borrowed at this rate. Although, under the Act of 1926, the Exchequer is prepared to accept responsibility for 75 percent of this loss, many county councillors see grave objection to public funds being expended upon what is termed 'an uneconomic scheme' ...

"...In the absence...of a pressing and insistent demand from would-be small holders, county councils are not prepared to increase their present commitments and accept responsibility for a proportion of the financial loss which must inevitably be incurred so long as the rate of interest continues to exceed the net return obtainable from capital invested in the purchase and equipment of agricultural land."

4. Appropriateness of certain credit funds

It is interesting to note that in England, after such loans had been made under the Land Settlement (Facilities) Act of 1919, the Ministry of Agriculture and Fisheries advised against the further granting of this type of loan in a memorandum submitted to Parliament during the time of the consideration of the 1926 Act. The corresponding passage in the memorandum reads as follows:

"It is proposed to repeal section 18 of the Land Settlement (Facilities) Act, 1919, under which Councils may make or guarantee loans to their tenants. This provision has proved very unsatisfactory in practice. Speaking generally, though there are striking exceptions, those to whom loans have been granted have shown themselves the least successful small holders. Many of them appear to have assumed that their loans could be used by them indefinitely as farming capital, and about 40 percent of the amount advanced (176,000 pounds) has been written off as irrecoverable. Another reason for

⁶⁷/Ministry of Agriculture and Fisheries, Land Settlement in England, 1919-1924, p. 11.

⁶⁸/Ibid., p. 223.

the repeal of the section referred to is that all the information received by the Ministry indicates that there is at present a demand from suitable applicants, possessed of both agricultural knowledge and adequate capital, sufficient to occupy all the small holdings which it will be practicable to create under the Bill for many years to come."^{68/}

In its report on land settlement activities in the period from 1919 to 1924 the Ministry said:

"...Councils have generally found tenants with loans more liable to fail than tenants without loans, and that such failures entailed heavy loss. Few, if any, Councils would have undertaken the responsibility for Section 18 (i.e., of the Act of 1919) if the loss had not fallen on the Ministry up to March 31, 1926, and it is difficult to see how the provision of loans on exactly these lines can form any part of a permanent small holdings policy. Shortage of capital could probably be better met by borrowing from a credit society than by relying on the guarantee of a Local Authority, which happens to be the owner of the particular holding."^{69/}

Section 18 of the Act of 1919 was actually repealed by the Act of 1926. Five years later, however, by the Act of 1931, the English land settlement agencies were again authorized to grant equipment loans. Under the latter act such loans can be extended to unemployed persons, to agricultural workers, and to ex-service men.

5. Proper usage of funds

With respect to equipment credit in Germany, Lang points out that in some cases this type of credit has not always been used for the purposes for which it was intended. According to him some land settlement agencies have used this type of credit for the purpose of making up the 10 percent down payment which they had been asking from the settlers in the two years preceding. He feels that thereby these funds were improperly applied, and therefore, suggests that the use of these credits should be supervised more strictly.^{70/}

As to the ways in which cooperative organizations have employed their own funds, two interesting statements concerning English and German experiences may be mentioned. The first, made by the Agricultural Organization Society in a leaflet published in 1918 states, regarding the use of their own capital:

^{68/} Ministry of Agriculture and Fisheries. Explanatory Memorandum, Cmd. 2751. 1926. 23:985.

^{69/} Ministry of Agriculture and Fisheries, Land Settlement in England and Wales, 1919 to 1924, p. 20.

^{70/} E. Lang. Op. cit., 703.

"In some cases it is simply wasted by being left in the bank for $2\frac{1}{2}$ percent interest. Other societies make a profitable use of their capital by investing it in horses and implements for the use of the members, or it may be used for trading."^{71/}

The second statement made by Lent is to the effect that in Germany in various instances cooperative land settlement associations get into financial difficulties by using their operating capital for the repayment of encumbrances upon the settlement land. If this was done, and no additional credit could be found, the operating capital of the association became tied up so that no money was available for other operations.

6. Methods of conserving funds

By the method of asking creditors not to withdraw their mortgages from land which is acquired for subdivision, a great amount of private capital has been made to stay in the field of German post-war agricultural settlement with the result that to that extent no public means had to be provided. This has been of considerable importance in a country where capital has been rather scarce since the World War. On the other hand, it has also been recognized by the German land settlement leaders that the application of this method involves certain disadvantages. A great variety of conditions have been imposed in connection with the continuation of these mortgages, particularly concerning maturity dates, and it is to be expected that in the long run these different stipulations will cause not only much complexity and confusion, but also new financial burdens for the public agencies. However, these inconveniences and uncertainties have been accepted for the sake of saving large quantities of public capital in the existing difficult financial situation.

7. Subventions and losses

With respect to the high subsidies and losses which occurred in England in connection with the Land Settlement Scheme under the Land Settlement (Facilities) Act of 1919, the following interesting statement was made in the LONDON TIMES of November 6, 1925:

"The post-war Small Holding Scheme was not approached simply as an economic proposition. Money spent on it has been regarded as a debt due to the fighters; and, if their interests can generally be furthered, the nation, even in its present impoverishment, is not inclined to be too strict over the outlay which is necessary."

^{71/} Cooperative Land Renting Societies, Small Holdings and Allotments, Agricultural Organization Society, Leaflet B2, Reissue January 1918.

On the same subject the Ministry of Agriculture and Fisheries pointed out in its Report on the Work of the Land Division for 1931:

"The contributions payable to Councils are mainly, if not entirely, in respect of their Land Settlement Estates. The total contribution is heavy, but the circumstances in which the land Settlement Scheme was undertaken were wholly exceptional. Not only were building costs unprecedentedly high at the time when the bulk of the work was carried out, but also the greater part of the loans raised by Councils to enable them to meet the necessary capital expenditure, carried interest at the rate of $6\frac{1}{2}$ percent. 14,784,000 pounds were borrowed by Councils from the Public Works Loan Commissioners, the money having been issued by the Treasury out of the Consolidated Fund under Section 14 of the Land Settlement (Facilities) Act of 1919; and apart from any loans prematurely repaid out of sales of lands or local borrowings, interest at the high rates current when the loans were granted is being, and under existing arrangements will continue to be, received by the Exchequer from Councils until the loans fall in ... It is important, when considering the amount of the Ministry's contributions to Councils, to bear in mind that the object of these contributions is to enable Councils to meet outgoings consisting mainly of loan charges payable to the Exchequer at a high rate of interest."^{72/}

Problems of Future Development

As to problems of future development, only a few statements can be made at this time. They all refer to German land settlement activities. This fact, however, should not be taken to imply that no important problems of this nature are existent in the other countries included in this discussion.

1. Development of funds of settlement agencies

As to the German semi-public agencies, it has been pointed out by Stolt, Massman, and others in recent years that further measures are needed to rebuild their basic capital, which was largely destroyed in the inflation period of 1919 to 1923.^{73/}

In 1933 Massmann made the following statement:

"The raising of the basic capital of the semi-public land settlement agencies is an important task which the Federal Government (or the German Land Settlement Bank) is now required to perform along with the Prussian Government and the governments of other States

^{72/} Ministry of Agriculture and Fisheries, Report on Work of the Land Division, 1931, pp. 16f.

^{73/} As to Stolt, see Article I of this Series, n. 37.

concerned with land settlement. One of the prerequisites of such a measure is the settlement of the large amount of risks and losses which most of the land settlement agencies -- like all economic enterprises active in Germany in the period from 1924 to 1930 - are still carrying. The measures needed in this respect are under way. They will help not only the semi-public land settlement agencies, but also those private land settlement agencies which have worked efficiently, have proved to be reliable, and, therefore, are wanted as further participants in the work of agricultural settlement."^{74/}

Since Massmann made this statement, the German Federal Government has been given sole responsibility over land settlement matters. It will, therefore, rest with that Government to decide whether and to what extent it intends to undertake the strengthening of the financial power of the semi-public land settlement organizations, and in what way this should be done.

2. Promotion of the creation of funds among settlers

How the creation of funds among settlers may be further stimulated has been an important issue in Germany in recent years. Some seem to think that it would be possible to promote the accumulation of capital through saving in the ranks of prospective settlers by introducing into agricultural settlement the methods of collective saving developed by urban building savings institutions. Others seem to believe that only individual saving should be stimulated.

In this respect, it is interesting to note the following statement by Massmann which is in favor of individual saving:

"The principle of collective saving, as developed by the building savings banks, will as a rule not be applicable. Against this system, important objections may be raised on the basis of experiences of the last few years ... The strongest forces are mobilized if a peasant family is able to develop, through saving, a new opportunity for those who are not going to take over their place. Methods of collective saving will be adopted in peasant circles with much greater difficulty than in the city. There is even danger that the building savings banks, whose operating possibilities have decreased on account of the decline in the urban building industry, will attempt to carry over their collective saving system to the field of agricultural settlement with too much propaganda. Instead, the method of individual saving on the part of separate applicants, out of which each

^{74/} Karl Massmann, Op. Cit., pp. 12-13.

will obtain funds, which in the real sense of the word are funds of his own (funds on which no interest and amortization have to be paid), is to be preferred."^{75/}

3. Length of payment deferment period for settlers

In Germany some persons have demanded that the deferment period, which is granted to the settlers at the beginning of their operations on the new holdings, and has usually been not more than one year, should be extended, and that a second year of deferment should be added. Others feel, however, that the addition of another year of postponement of payments should not be made. Arguing against a second year of postponement of payment, Lang makes the following statement:

"Even without having a second year of deferment, the settler is blamed for being in a comparatively advantageous economic position with the aid of the cheap Federal and State loans which he received, although this reproach is not justified, in view of the fact that the rent payments which he has to make have reached the limits of his ability to pay and exceed many times the net returns made in recent years by large estates. It is not advisable to give the settler too great an advantage over the older peasant holdings at the expense of the State purse. Thereby the settler would easily become a pensioner of the State. If, as in the case of good land settlement enterprises, the settler, at the time of the occupation of the holding, is given a full harvest, the value of which often exceeds the amount of the down payment, he must necessarily be able to get along with one free year. Under special circumstances, he may in addition be granted certain other terms which would make it easier for him to make his rent payments, or, as is done in some instances,^{76/} he may be granted a small reduction of the full amount."

^{75/} Karl Massmann. Op. cit., p. 14.

^{76/} E. Land. Bedeutung und Organisation der laendlichen Siedlung in Deutschland, in die deutsche Landwirtschaft, Berlin 1932, p. 713.

S U M M A R Y

Briefly, the main developments in the field of financing full-time farming settlement in England, Germany, and the Scandinavian countries have been as follows:

(1) Land settlement has been financed partly by settler funds and partly by non-settler funds. If non-settler funds had not been used, an insuperable barrier would have been erected against settlers who, although otherwise desirable, did not have enough capital to cover all the costs involved in their placement on the land.

(2) Non-settler funds have been provided both in the form of loans and in that of subsidies. With reference to the objectives sought, the most important specific funds have been land purchase funds, land improvement funds, funds for equipment or initial establishment, funds for the establishment of public service facilities, funds for the purchase of new holdings by installments on the part of the settlers, and funds to mobilize the settlers' own capital.

(3) In Germany and Norway special public land settlement banks have been created. The Prussian Provincial Land Banks, and later the Prussian Land Rent Bank, have been entrusted with the task of supplying long-term credit to settlers through issuing of land rent bonds. Thus these banks have taken over the financial claims of the settlement agencies against the settlers, thereby making the capital of these agencies available for new projects.

(4) Subsidies have been provided mainly for the purpose of covering administrative expenses; assisting in the purchase of land; contributing to the cost of land improvements; helping meet the expenditure for interim management; reducing interest rates; deferring or interrupting payments; and helping meet capital losses.

(5) In Denmark the revenue from a tax on entailed estates was used to build up a land purchase fund.

(6) Special efforts have been made in Germany to stimulate among settlers the accumulation of capital through saving prior to placement on the land.

(7) In Germany, again, special arrangements have been made through which members of the Voluntary Labor Service assist those who aspire to become settlers in building up funds of their own to be used in connection with their settlement on holdings.

(8) Before the World War interest rates on land settlement loans ranged from 3 to 4 percent. After the World War much higher rates were charged in some of the countries reviewed. In the period from December 31, 1918 to July 31, 1921, the local settlement authorities of England had to pay as much as 6½ percent on loans received from the Public Works Loan Commissioners. More recently, however, the rates charged have been very similar to those charged in the pre-war period. Particularly, cheap public credit for the erection of buildings was furnished in Germany at the rate of 1 percent interest for several years after the World War up to March 1930.

(9) Payments on loans have usually been collected semi-annually.

(10) In several of the countries included, loans for land purchase, land reclamation, and farm purchase by installments have been granted up to 90 percent of the values involved. In Germany a 90 percent loan for the purchase of a holding by installments is granted only in connection with farms operated wholly by family labor without any permanent help or hired labor. With respect to loans for the erection of buildings, the limits ranged from two-thirds to nine-tenths of the value of the loans. Usually, such loans were, furthermore, fixed at stated sums.

(11) While in England land settlement loans to local authorities have been on a long-term basis, those made to settlement agencies in Germany and Sweden have been on an intermediate basis, periods of repayment ranging from two to five years. Under the latter system, the capital of the land settlement agencies is set free at the time when the settlers take over their holdings by a refinancing arrangement, with the result that the settlement agencies are able to use their capital at once for the preparation of new holdings. The main types of loans involved are loans for land purchase and land improvement. English equipment loans have been granted for periods of from three to five years. As to loans for the purpose of enabling settlers to pay the residue of the purchase money by installments, the periods of payment allowed to the settler have been from 30 to 98 years. In England this period has recently been 60 years; in Germany, about 50 years; and in Denmark, 30 years.

(12) In all the countries concerned, the postponement of payments at the time when the holding is taken over by the settler has usually been granted, in view of the fact that it commonly takes the settler a number of years to become adjusted to his new surroundings and to develop his farm to the full extent.

(13) In Germany efforts have been made to conserve public loan funds by inducing creditors not to cancel mortgages on land acquired for subdivision. By a recent Act, passed in January 1935, creditors can even be compelled to let their mortgages remain on the land.

(14) In England in the period 1893-1933, more than 20 million pounds were advanced to local authorities in England and Wales, by the Public Works Loan Commissioners, in the form of loans for the creation of small holdings. This money was used in the financing of about 33,000 such holdings.

(15) In Denmark, from 1900 to 1932, state loans amounting to about 143 million Danish crowns were loaned out for the purpose of financing the creation of almost 15,500 full-time and part-time agricultural holdings on land bought by settlers. In addition, from 1920 to 1929 approximately 50 million crowns were advanced in the form of loans to finance the development of 4,227 agricultural holdings on state-owned land.

(16) In Sweden, from 1905 to 1929, government loans amounting to about 152 million Swedish crowns served to finance nearly 35,400 full-time and part-time agricultural holdings.

(17) On the purchase of holdings, down payments are generally required. Statistics available on German land settlement show that the average proportion of the purchase price required of a settler in the form of a down payment was 19 percent before the World War, and 25.4 percent in the period from 1924 to 1928. Since 1916 the down payment required for a German holding that is to be operated by family labor without permanent hired help has been 10 percent. In Denmark and Norway it has also been required that the purchaser pay down at least 10 percent of the price. In Sweden the initial payment has been one-sixth of the value of the holding. The earlier English laws required a down payment of one-fifth of the total price. Under the Act of 1926 settlers who wish to purchase a holding are required to make an initial payment amounting to at least the equivalent of one semi-annual installment. Apart from a down payment, settlers have often been asked to furnish a certain amount of capital in the form of equipment.

(18) In both English and German land settlement, however, there have been cases in which no down payment has been asked. In England this occurred under the Act of 1919 in connection with the settlement of ex-service men. In Germany it took place with respect to part of the settlers, under the Prussian Land Settlement Act for Posen and West Prussia of 1886.

(19) In England the net income from holdings established under the Act of 1908 up to the end of 1918 was sufficient to pay the interest and redemption charges on the capital of 5,500,000 pounds invested in the holdings. Considerable losses occurred, however, in connection with the land settlement projects developed under the Land Settlement (Facilities) Act of 1919. The total of these losses has been approximately 9,500,000 pounds.

(20) In connection with land settlement operations under the English Small Holdings and Allotments Acts of 1907 and 1908, it was agreed that 50 percent of the losses suffered by local authorities with respect to small holdings should be paid on the part of the Board of Agriculture. The Land Settlement (Facilities) Act of 1919, which was to further the settlement of ex-service men after the World War, went even so far as to provide that the Ministry of Agriculture should pay all necessary and reasonable losses incurred by councils up to March 31, 1926. The Act of 1926 provided for the reimbursement of 75 percent of the anticipated losses on approved schemes.

(21) Due to inflation and lack of capital, a considerable shortage of land settlement funds occurred in Germany during the period from 1919 to 1926. It is interesting to note, however, that the lack of funds during the period of inflation was more than offset by low prices of land, resulting in part from the confusion and the ignorance as to real values which were then prevalent.

(22) In the opinion of the English Ministry of Agriculture, the high rates of interest, which were charged in the post-war settlement operations in England and Wales up to 1923 are mainly to blame for the uneconomic outcome of the land settlement scheme under the Land Settlement (Facilities) Act of 1919. Also the rates charged in the first few years of the operation of the Act of 1926 have been considered as too high, and the Ministry is of the opinion that they have retarded land settlement activities.

(23) An improper use of equipment credit has, in some instances, occurred in Germany, inasmuch as some land settlement agencies have used this type of credit for the purpose of making up the 10 percent down payment.

(Rates underlined refer to loans made to settlement agencies)

a/ After five years

Table 17 cont'd.

Year	England			Germany			Denmark			Norway			Sweden		
	Interest	Amortization	Interest plus Amortization	Interest	Amortization	Interest plus Amortization	Interest	Amortization	Interest plus Amortization	Interest	Amortization	Interest plus Amortization	Interest	Amortization	Interest plus Amortization
1891				$3\frac{1}{2}$			Farm Purchase								
↓															
1903										$3\frac{1}{2}; 3\frac{1}{2}$					
↑															
1909							3								
↑															
1914	4			4			4; 5								
↓															
1921							$4\frac{1}{2}$		$5\frac{1}{2}$						
1922															
1923															
1924							$4\frac{1}{2}$								
1925															
1926															
1927				$5; 5\frac{1}{2}$											
1928							$4\frac{1}{2}$								
1929															
1930										$4; 4\frac{1}{2}$					
							General								
1892	$3-1/8$														
↑															
1903	$3\frac{1}{2}$														
↓															
1910							3		4						
1911				3	$\frac{1}{2}$	$\frac{4}{2}$									
1916							$\frac{4}{2}$	$\frac{3}{4}$	$\frac{4\frac{3}{4}}{2}$						
1917															
1918	$6\frac{1}{2}$														
1919															
1920															6-7
1921	$\frac{6}{2}$														
1922	$5\frac{1}{2}; 5$														
1923	$\frac{4\frac{3}{4}}{2}$														
↓															
1933	$3-5/8$														
1934	$\frac{3\frac{1}{2}}{2}$														

Table 18. Rates of exchange for certain foreign countries at specified dates.

	: Great Britain :	Germany	:Denmark	: Norway	: Sweden
Date	: (Pound	: (Reichs marks)	:(krone)	: (krone)	: (krone)
	: Sterling)	:	:	:	:
	: (Dollars)	: (Dollars)	:(Dollars)	:(Dollars)	:(Dollars)
Oct. 1	:	:	:	:	:
of:	:	:	:	:	:
1913	: 4.8665	: 0.238	: 0.268	: 0.268	: 0.268
1919	: 4.8665	: 0.2382	: 0.2680	: 0.2680	: 0.2680
1923	: 4.5416	: 0.00000000320	: 0.1777	: 0.1535	: 0.2651
1934	: 4.9282	: 0.4049	: 0.2203	: 0.2478	: 0.2542
	:	:	:	:	:

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